The Builder.

VOL. XXV.—No. 1251.

Life and Death at Sea.

IRE lately have been the losses at sea. In a maritime country like ours there are few persons who are not at some time or other anxious for one who has business in the great waters, and to whom the voice of the storm, as heard in the driving rain and moaning wind, does not now and then bring a message of anxiety, if not of fear. The dangers of the deep are continually being brought home to us, and no one of a reflective disposition can hear the raging of the storm without bestowing a thought of pity upon those who go down to the sea in ships. Such being the case, the annual publication issued by the Board of Trade, and known briefly as the *Wreck Register*, must, or at least, ought to, possess very general and widespread interest. We may remark that these returns refer solely to "wrecks and casualties which occurred on and near the coasts of the United Kingdom." The volume for 1865 has been recently published. Let us see what story it tells.

The number of wrecks and casualties from all causes on the coasts of the United Kingdom, and in the surrounding seas, amounted to 1,656, against 1,390 in 1864. The annual average number of casualties during the five years ending 1859 was 1,204, and during the five years ending 1864, 1,483. Referring to this alarming increase in the number of accidents, the report says, "As has been before observed, the general average number of casualties reported will probably increase from year to year, owing to the increase in the number of ships frequenting our coasts and narrow adjoining seas." This passage requires a little closer consideration. It is well known that the authorities at Whitehall issue certain rules and regulations respecting the lights, chain cables, boats, &c., to be carried by vessels; and in the case of steamers, the boilers must be inspected and passed by an officer of the Board. The Board of Trade have, of course, no authority over foreign vessels,* but nearly 1,700 of the 2,012 ships to which casualties happened were British ships, and therefore subject to Government regulations. On the present occasion we have nothing whatever to say as to the value of these rules and regulations, and we shall not inquire whether they were ever really instrumental in saving a single life or preventing a single "inevitable" accident. Assuming, however, that the system is a good one, it appears to follow, as a matter of course, that it must always be capable of improvement. New inventions ought to furnish new means of preventing accidents, and the experience of one year should yield some hints for the improvement and extension of the system during the next. Improvements are constantly taking place in the construction and fitting of vessels, and there appears to be no reason why the requirements of the Board should not be made stricter as science provides us with ready and simple methods of fulfilling those requirements. It is quite evident, however, from the sentence we have quoted above, that the Board is now, in its own estimation, perfect, so far as the enforcing of precautionary measures is concerned. "We can do no more," the officers seem to say; "we are quite satisfied with the results; and, as the shipping trade increases, so will the number of casualties. We cannot do any more good, and we promise not to do any less harm." Having protested against the implied opinion of the Board of Trade, that they may now fold their arms in mute admiration of the perfect machine which they have invented and set going, we return to the immediate subject of our article.

Although the number of casualties reported in the year under consideration amounts to 1,656, the number of ships lost or damaged reached 2,012, representing a registered tonnage of upwards of 377,000 tons. The number of ships exceeds the number of casualties, because in cases of collision two or more ships are involved in one casualty. The number of ships in 1865 is in excess of the number in 1864 by 271, *and is larger than any number yet reported.*

Passing now to a more important part of our subject, we find that no less than 698 human beings were swallowed up by the pitiless sea during the year 1865. This is in excess of the number lost in any year, excepting 1859, when the loss of the *Royal Charter* brought the return up to 884. It is very interesting to notice that the whole of the lives lost in 1865 were lost in 164 ships. Out of the 2,012 to which casualties happened, 124 were laden vessels, thirty-three were vessels in ballast, and in seven cases it is not known whether the vessels were laden or light; 131 of these ships were entirely lost, and thirty-three sustained partial damage. Of the 698 lives lost the very great number of 275 were lost in vessels that foundered, fifty-three lives were lost on board vessels in collision, and 335 in vessels stranded or cast ashore. The remaining thirty-five were lost from various causes, such as by being washed overboard in heavy seas, by explosions, &c.

We find then that the fury of the storm was only appeased by the sacrifice of 698 human beings. How far has this enormous sacrifice been necessary? Let us see to what extent the loss of the 275 lives in vessels that foundered was due to causes altogether beyond human control. We find, on reference to the return, that they were lost in forty-three vessels, but it does not state how many of these vessels were unseaworthy. It appears, however, that of the eighty-five vessels which foundered in 1865, thirty, or about one-third, are returned as unseaworthy. We may, therefore, say that one-third of the lives lost in foundered vessels are due to causes which human foresight might have avoided. It is melancholy to think of the number of lives which are annually sacrificed by the cupidity of owners, who, rather than go to the expense of keeping a vessel in proper repair, will risk the lives of the crew in a craft which is scarcely fit to make a voyage from London to Gravesend. What says the report? "In 1865 there were ninety-eight casualties to smacks and other fishing vessels. Excluding these ninety-eight fishing vessels, it will be seen that the number of vessels employed in the regular carrying trade that have suffered from wreck or casualty during the year is 1,914. If this number be again sub-divided, it will be found that about half of it is represented by the unseaworthy, overladen, or ill-found vessels of the collier class, chiefly employed in the coasting trade. For the three years ending 1865 the number is more than half." There is another point which is brought out in the report, viz., the great age of some of the ships to which casualties have happened. During the last year 1 of the vessels wrecked was more than a century old; between the ages of 91 and 100 there was 1; between 81 and 90, there were 5; between 71 and 80, 9; between 61 and 70, 20; between 51 and 60, 51; between 41 and 50, 84; and between 31 and 40, 145. "The state of rottenness and want of repair of some of the ships above 20 years old often calls for remark. Even at the age of 25 to 30, it sometimes happens that a ship is so rotten as to fall to pieces immediately on touching the ground, without giving the crew the slightest chance of getting out their boats." What, then, are we to expect in the case of ships 40, 50, 60, 70, and even 100 years old? We wonder whether the owners of rotten craft like these, which ought to have been sent to the ship-breaker's yard long ago, ever think that they are in some degree responsible for the deaths of the often notoriously insufficient crews who work these vessels. If they ever think of the *matter* at all they probably say, "Well, we know that these vessels are rotten, we know that the crew is insufficient, but the voyage is short, and should the vessel meet with a misfortune the cargo will be covered by the insurance: and, as to the crew, they will in all probability be picked up by some life-boat or passing ship;" and the conscientious shipowner sends his guinea subscription to the National Lifeboat Institution, and thinks no more about the matter. It may be that the multiplication of lifeboat stations has a tendency to make owners more careless, in the same way that foundling hospitals are found to encourage immorality. Be this, however, as it may, it is most gratifying to learn, that during the year 1865, no less than 4,162 persons were rescued from a watery grave, some by lifeboats, some by rocket apparatus, some by the ships' own boats, and some by passing vessels. It is not our intention to speak here of the lifeboat crews, whose bravery is, as a rule, beyond all praise. The number of lifeboats in the United Kingdom, now amounts to 192. In 1855 it was 127.

There is some difficulty in dealing with the 53 lives lost on board vessels in collision. The number of fatal collisions was 20, whilst the total number of collisions amounted to 354. Of this number 86 are put down as being caused by bad look-out, 18 by neglecting to show proper lights, 22 by want of seamanship, 27 by general negligence and want of caution, 30 by inevitable accident, and 31 by error of judgment. We may fairly attribute the casualties classed under the first four heads to causes entirely under human control. The total amounts to 153, or about two-fifths of the whole number of collisions. We may conclude, then, that 20, or two-fifths of the 53 lives lost by collision have been needlessly sacrificed. It is to be noted that the number of lives lost in collision is, with one exception, less than the number lost from the same cause in any year since 1858.

We now come to consider the 335 lives lost in vessels stranded or cast ashore. The return does not furnish us with the materials necessary for determining with much exactness how far the loss of these lives was due to negligence. The number of casualties other than collisions and cases of foundering for the year amounts to 1,245; of which 236 were due to "inattention,

* In January, 1863, certain regulations were agreed upon by this country and France for the purpose of preventing collisions at sea. Since that date thirty-one other governments have adopted the same regulations, which are now almost universal. It does not appear, however, to have had the slightest effect either upon the absolute or relative number of collisions which take place annually. The proportion between the number of collisions and the number of casualties other than collisions was the same within a small fraction in 1865 as in 1860 and 1861, and differed but little from the proportion in 1862. The absolute number of collisions has been steadily increasing since 1863.

carelessness, or neglect," and fifty-six arose from "defects in ships or equipments,"—292 in all, or about one-fourth of the total number of casualties other than collisions and founderings. Thus upwards of eighty lives, or one-fourth of the number lost by strandings and founderings, might have been saved. The neglect of the lead in cases of doubt, as revealed in the course of the official investigations, is nothing less than scandalous. The stranding of the *Louisana* on the old Head of Kinsale is a case in point. This vessel, with a crew of eighty-one hands and 500 passengers, left Queenstown on the 12th of April, 1865, and in little more than two hours afterwards she was ashore. "In commenting upon this casualty," says the return, "which took place within two hours after leaving port, the Court were much struck with the want of common prudence on the part of the master in hauling the ship to the westward when the fog came on, as he had the whole Irish Channel open to him; nor had he any reason whatever for approaching the land, having left port so recently; ..... and although the fog was very dense and the position of the ship uncertain, the important and necessary precaution of using the lead was entirely neglected." Fortunately no lives were lost, but the Board suspended the captain's certificate. So long as Board of Trade certificates are granted to men capable of committing such fatal errors, "the general average number of casualties will probably increase," to use the Board's self-satisfied utterance. The *Byzantium*, which was stranded on the Gunfleet Sands in February, 1865, with loss of fourteen lives, might have been saved had the lead been used. The *Eclipse*, stranded near Hartland Quay on the 5th of April, was lost "by the gross neglect of the lead."

We must omit the consideration of the thirty-five lives which were lost from "various causes," from want of the necessary details, and we will admit, for argument's sake, that they were all purely accidental. We have, however, clearly shown that of 698 lives lost last year on our coasts, at least 200 have been literally thrown away and wasted. The most enthusiastic special pleader would, we think, hardly venture to argue that a ship is lost "accidentally" when the captain neglects the ordinary rules of navigation; that a collision is "inevitable" when, as in the case of the steamer *Aleppo*, the officer keeps in his course, without slackening speed, because "he supposed the schooner was taking the same course as the steamer;" or that it is a matter of surprise that ships built about the time of the battle of Trafalgar should founder by the dozen whenever a sudden storm overtakes them a few miles from land.

With reference to the geographical distribution of shipwrecks, it appears that by far the largest number of casualties happen on the east coast. Last year the numbers were: east coast, 868; west coast, 386; south coast, 187; Irish coast, 146; other localities, 69. The number of lives lost is, however, greater on the west coast. During the past year the lives lost from the Fern Islands to the North Foreland amounted to 113, whilst the Irish Sea (between St. David's Head and Carnsore Point in the south, to the Mull of Cantire and Fair Head on the north) swallowed up 139. The disproportion is more striking if we take the totals for the last seven years, which give 825 and 1,736 respectively. The most fatal wind is that from the south-west, and the least so that from the north. Westerly gales are far more fatal than easterly gales.

Much has been said and written lately about the advantages and disadvantages of extending Government inspection to ships' compasses, and the subject has occupied the attention of the Royal Society. It may be well to see how far the casualties of 1865 were due to compass errors. We find accordingly that six casualties, none of which, however, were attended by total loss of the vessel, were caused by "local attraction and defects of compasses," but the return does not show what loss of life took place in consequence of these accidents. Referring to the *précis* of special inquiries ordered by the Board during the year, we find that the *Derwent*, which was stranded on a sunken rock off the island of South Uist on the 19th of June, was lost from this cause. Before leaving port, the vessel had undergone extensive repairs, which had altered her permanent magnetism. The compensating magnets of the steering compass had been removed, and not replaced. The court acquitted the master of blame. In the case of the *Hector*, which was stranded off Wicklow Head on the 9th of November, the master was acquitted. "Either the compasses were inaccurate, or the evidence of the witnesses as to the courses steered was false; and the Court being reluctant to come to the latter conclusion, and finding the evidence as to the state of the compasses conflicting, gave the master the benefit of the doubt, and returned him his certificate." The master had only joined the ship a few days, and before leaving Liverpool he wished to have her re-swung, as he had heard that the compasses were inaccurate; but on the assurance of the former master, he proceeded to sea on the assumption that they were correct. Amongst the vessels lost abroad we find that the *Eastern Province*, which was stranded eighteen miles west of L'Agullas, on the 26th of June, 1865, was lost in consequence of a defect in the compasses. "It appears there always had been a great difference between the vessel's compasses, for which the master made allowance, but for which he could not account. The Court were of opinion that up to the time of reaching L'Agullas the deflection of the compass was constant, and that the vessel was kept on her right course, but that after passing L'Agullas some change unaccounted for occurred in the performance of the needles of the compasses, which put the master out of his reckoning. The present state of our knowledge of the variation of the compass on iron ships is most unsatisfactory, and it is doubtful whether Government control would be attended with any good results. It may be laid down as a general rule that any attempt to maintain by legal enactment a higher state of efficiency than has already been proved to be practicable is bad.

Before quitting the subject, we take the opportunity of protesting for the hundredth time against the reckless waste of precious human life which takes place every day, and which is either justified by the "pressing demands of a high state of civilization," as if civilization were a Moloch only to be appeased by the annual sacrifice of a certain number of human beings, or is put to the account of "inevitable accident." Human nature always was and always will be infirm, and wood and iron are sometimes as ineffectual as a broken reed in resisting the fury of the storm. But until we give human nature a chance, for instance, by not allowing the look-out man to remain at his post some hours after he should have been relieved, we can hardly plead negligence, and we refuse to recognise accident when a vessel fails to ride out a gale with a cable notoriously weak and in bad condition. Viewed even in the abstract, the preservation of human life is a sacred duty with all. It is not that the life of a particular individual is of apparently little or no value either to himself, to his own circle, or to the community at large that it is not precious. It is not that the life of a man who is poor, insignificant, and wretched is of any less value in the abstract than that of one who is rich, famous, and happy. It is still a life,—something which ingenuity cannot create and wealth cannot buy. Property may as a rule be replaced—not so human life. The waste of material possessions is reprehensible, but who shall estimate the sin of needlessly sacrificing human life?

DORÉ'S PARADISE LOST.*

"ARS LONGA," said the alchemist, "VITA BREVIS." Yet, wide as is the domain of art, it has its definite and natural limits, and no artist can attain the highest degree of excellence who is not aware, either by theory or by instinct, both of the nature of those lines of demarcation, and of their relation to his own genius, his own skill, and his own material and method of expression. With his skill, indeed, the true artist is never wholly content. Let his progress be as rapid as has been that of any great master before him, the outward expression will never adequately convey the full force of the inspiring idea. At times we may recognise the intellectual presence of an artistic spirit in one to whom deficient education or even niggard nature has almost entirely denied the faculty of expression. It is impossible to look at the works of Haydon without a saddening impression of this kind, an impression, moreover, that must have been but too keenly experienced by that unfortunate limner himself. At the other extreme of the scale may be ranked such a master of expression as Titian, in a comparison between whose earlier and later productions we may trace the mode in which minute and conscientious attention to detail has educated the hand until it seemed able to counterfeit life almost without the mechanical intervention of drawing—to throw on canvas the thoughts of the artist, or the likeness of his subject, by means that can neither be copied nor altogether comprehended. In some of the later sketches of Gainsborough this marvellous power is fully evinced. One may be particularized as an example in which a donkey seems all but alive, although, on a close inspection, you can define neither the eye nor the ear. In the gradual change of the style of Turner, after the culmination of his powers we trace something more than the carelessness of conscious power, we detect the growing imperfection of the artist's eyesight. Some of these latest of his productions, which look at first mere unintelligible puzzles, become actual outstanding nature if gazed at through nearly closed eyes.

Of the three chief forms under which art appeals to the imagination, that which forms the province of the sculptor is by far the most narrow. The æsthetic limit of delicacy of detail in marble is almost as confined as is the mechanical limit. The architect may fret his tracery into lace work, and the only check upon the exuberance of his fancy, or the delicacy of his detail, is to be found in the texture of the stone which he employs; but if the sculptor force his work to smell of the chisel and the file, if he obtrude upon the sense any *tour de force*, the impression produced is rather that of wonder than of admiration. Take, for instance, that highly elaborate statue in the San Severino chapel, at Naples,—the man in the net,—or its equally finished veiled companion. No fault can be found in the detail. The anatomy is perfect. The net might have been taken from a fishing-boat in the bay, and only petrified after being entwined around the limbs of a finished statue, or of a man turned to stone. And yet the impression produced on the mind, if compared to that left by the bronze Mercury in the Museo Borbonico, is like the recollection of a visit to Madame Tussaud's museum, rather than of one to the Elgin marbles. Again, the subjects fit for sculpture in relief may be unfitted for statuary. Few figures are more admirable than the "Evening" of Thorwaldsen, but that great artist was instinctively aware that his art could embody that poetic idea only *in relievo*. The great anatomical difficulty of adding a third pair of limbs to that vertebrated skeleton of which alone we know the homology, can only be evaded—it cannot be mastered, and the hint which is given by the prophet who saw in vision winged intelligences, and which seems to be consonant with that singular osteological provision which has given a double shaft to the extremity of each vertebrated limb, has never yet been taken by the artist.

Again, the sculptor, more than any one, suffers from the restriction and from the changes of fashion. It was long before the artists of Greece dared represent the nude form, and the habits and temper of a people who dwelt in a climate where clothing is at times an incumbrance, and whose chief national solemnities included the contests of the Palæstra, had to be duly respected by the sculptors, no less than by the philosophers of Athens. The nude, when once arrived at, might be thought to be beyond the pale of the caprices of fashion. Yet it seems, even to us, incongruous to find Roman emperors represented by pure heroic statues. It would be intolerable to see our own kings or captains so represented. The sculptor, then, is driven either to an adoption of the costume of his time which in a couple of generations seems to be grotesque, or, as we call it, old fashioned, or, as we call it, old fashioned, or he is forced to adopt a sort of conventionalized drapery that is destitute alike of truth and of meaning, that is a sacrifice to a confused idea of decency and of expedience, and that would have been well avoided even by the earlier contrivances of terminal figures, or of partially unwrought forms. In the first instance, where, from a longer lapse of time, the costume ceases to be old-fashioned by becoming antique, the work of the artist who is true to the costume of the day will regain or exceed its original value—the work of the conventionalizer will be despised.

No more illustrious instance can be cited of the struggle of genius with this great difficulty in a branch of art that forbids the use of what is vague and undefined, than is presented in the works of Roubiliac, the artist whom Lord Chesterfield called a sculptor among stone-cutters.

* Milton's "Paradise Lost," illustrated by Gustave Doré. Edited, with Notes and a Life of Milton, by Robt. Vaughan, D.D. London: Cassell, Petter, & Galpin. 1866.

No sculptor, of any age, appears to have exercised more perfect, if so perfect, command over marble. Of the life-like expression that he could communicate to countenance and to form, as in the head of Sir Isaac Newton in the ante-chapel of Trinity; the hand and arm of Mrs. Nightingale; the attitude of the Argyll "Eloquence," the statue which Canova pronounced to be the finest in England, there has never been but one opinion expressed by any competent critic. In the drapery of his figures there is equal command of the chisel—equal truth to nature,—patience without any parallel; but the very truth to the nature of the last century is unfavourable to a full appreciation of many works of this sculptor in our own. It has been the fashion for some persons, admirers of a meagre *quasi*-classic elegance, or of a servile portraiture that could be equalled or exceeded by mere mechanical means, to speak of the works of Roubiliac as being inconsistent with their own more excellent taste, because of their allegorical nature. A sneer at the terrible "Death" of Roubiliac is consistent with the taste of an age in which the progress of sculpture is represented by that of the Nelson Column, and its purity and dignity by the forms of Wellington on the archway, and of George IV. in Trafalgar-square. It is true that in the groups that adorn the nave and transepts of Westminster we see the same habit of thought and motive of taste that gave us the stately verse of Pope or the nervous vigour of Johnson; but the word "allegoric" may be used as a reproach to Phidias as truly as to Roubiliac. The Minerva of the Parthenon is as allegoric a subject as the Minerva of the Argyll monument. The "Eloquence" that stands beside her is as ideal as the antique and not more beautiful pleading figure in the Louvre. The moment she departs from pure portraiture, Sculpture can only produce symbolic figures, and in the choice between those afforded by the Parthenon, and those to be copied from the Missal, the real artist will feel that he has but little room to hesitate. Fame, Love, Death, from the chisel and burin of the sculptors and gem-cutters of the age of Praxiteles and of Pyrgoteles are members of the same Homeric, Dantesque, or Miltonic families that contain the Death, the Time, the Fates of the great Frenchman. The Apollo Belvidere is as true to the heroic costume of the Olympic games as is the Newton of Cambridge to that of the fellow students of the great philosopher.

The artist who covers plain surface with his productions, whether of brush, of chalk, or of pencil, has a far wider field and more unlimited range than the sculptor. He can, if a master of his craft, leave that which he dares not too minutely define in almost as much uncertainty as can the poet. But the limit of the painter lies in another direction. The artist who represents form by the chisel appeals to the same sense of beauty in whatever age he labours. He is impeded only by that which conceals his outlines, and he will ever be admired by those in whom the same blood and race produce the same appreciation of beauty. The Greek Venus will always stir the pulse of the European. The Egyptian kings and gods shed a solemn awe into the minds of men of like blood with themselves. But in the wide field over which the draughtsman revels we find the too opposite and contemporary principles of Gothic and of Latin art. There is a marked opposition between the schools—an inability of mutual comprehension. The Italian artists, of whom, in this respect, Raffaelle may be taken as the loftiest type, worship beauty and idealise nature in the effort to render human beauty more divine. The imagination of the Gothic artist, when once he departs from exactitude, turns to the grotesque and the diabolic. Beauty with him is realistic, the portraiture of modest and true maiden, of comely youth, or stalwart man; he does not elongate the limbs, and diminish the head, contract the mouth, and lower the brow. When he is anything but truthful, he becomes either unmeaning or quaint and grim. In the Dutch painters and Flemish artists we find the realism of the Gothic school most fully displayed; in the portly beauties of Rubens, in the clumsy forms that are invested with the marvellous light and shade of Rembrandt. The imaginative element, which peopled the black forests and giant mountains with gnomes, and trolls, and elves, we find in such men as Albert Durer or Retzsch. It may be true that the Virgin Mother of Bethlehem, if we recall her blood, her country, and her age, is not more truthfully represented by the Sistine Madonna than by the hard-featured vrows of Durer. But the poetic, superhuman purity of the most prominent object of Italian worship is embodied in the divine conception of the Italian painter. The Gothic artist, son of the race who in the time of Tacitus owned *simulacra nulla*, can only converse with the grotesque when he leaves the region of the real. Let the Italian attempt the grotesque and he produces only the disgusting. The political caricatures attempted by the new-born press of Italy since 1860 have proved most contemptible failures.

Of the two great opposing schools of art there can be no question as to which has the right to claim the gifted illustrator of the *Contes Drolatiques*. There is, no doubt, a classical school in France, of which it is not here needful to speak, and that the less so since neither in poetry nor in painting, neither in the tragedies of Racine nor in the pictures of David, does it commend itself to our insular taste. But there is also a widely different class of art, which is characterized by all the pointed wit, and by much of that dramatic action which we uncivilly call the grimace, of our politer neighbours. Its object is to excite a smile, and very often the smile is of that bitter kind that we term sardonic. A great master of this pictorial form of satire has just laid down his pencil; a satirist who was to Paris what our own lamented Leech was to London, save that where *Punch* chastised with whips, Gavarni chastised with scorpions. The field of an artist of this nature is very closely limited, and perhaps the more perfect is his command of his peculiar class of subject the more restricted is the range of his powers. The "*Enfans terribles*" of Paul Chevalier would have been impossible of depiction to Leech; the Frenchmen of the latter were not the *gamins* nor the *lorettes* of Paris, the loungers of the Boulevards, nor the bearded lions of the *Pays Latin*, but the vagrant Gaul, sea-sick, *égaré*, and uncomfortable, as we meet him in steamers or see him wander forth in search of "Leestersquarr,"—the foreigner who eats cold crumpets at the pastry-cook's,—the Parisian as he is *not* at home. Gavarni, on the other hand, when that artist visited London, not only failed to catch the idea of the Englishman, but is said to have been actually spoiled by our gloomy climate for the use of his native pencil. With all the fire, and with more than the power of Gavarni, Gustave Doré has inscribed his name in the admirable illustrations of the *Contes Drolatiques*, as a realist rather than an idealist, a Gothic rather than a Latin artist,—a lover of force, of truth, and of humour, rather than a worshipper of beauty, if we except the beauty of landscape.

In the whole range of literature, it would be hard to produce a work more incongruous to the genius of such a designer than the "Paradise Lost." A great artist,—and Doré is a great artist,—unrivalled in fecundity, unsurpassed in power and truthfulness of drawing, mastering the difficulties of torsion and foreshortening with a touch that recalls that of the great Florentine, massing light and shade with a brush dipped in the gloom and glow of Rembrandt, depicting animal life, up to a certain point, as faithfully as Landseer or Rosa Bonheur, and possessing an acquaintance with the manner in which the direction and massing of lines give at will, either height, or breadth, or distance, which seems to be peculiarly his own,—such an artist may say, *Nihil humanum a me alienum puto*. Who shall forbid such a one to enter into Eden, the garden of God? The attempt we cannot lament; of the success we must speak with high, if not with unrestricted admiration. Doré has achieved much, but he has not achieved a miracle. It is not for the artist who could paint the very knight that Cervantes drew to limn the chaste matronhood of Eve, or the proud though fallen majesty of Satan.

To realise the scenery of the "Paradise Lost," we must remember who and what was its author. An English puritan, with the education of a classical scholar, whose slowly maturing genius had been ripened by the bright skies and lovely scenery of Italy, and whose bardic talent was so fired by his religious sentiment that he failed to distinguish, in his verse at least, between the poetic and the prophetic inspiration. A puritan who would love to linger in the dim religious light of the cathedrals built by his Catholic ancestors. An Englishman who read and who wrote, Greek, Latin, Italian, both in prose and in poetry, to whom Homer, Dante, Virgil, were familiar friends, a man of earnest thought and ardent action, of personal beauty as remarkable as his personal purity was unblemished; and who, looking forth from the early darkness which he shared with "blind Thamyris and blind Mæonides, and Tiresias and Phineus, prophets old," saw an Eden peopled by such glorious forms as have appeared to no mortal vision since the ladder was beheld by the Syrian patriarch that reached from earth to heaven. Such was the man to whom the English people are indebted, if we may not say for their theology, yet at all events for that organised and detailed interpretation with which they have been wont unconsciously to overlay the simple grandeur of the Hebrew Scriptures. That the Paradise of Milton is not the Eden of the Pentateuch, is admitted by those admirers of our great poet who tell us that he drew his ideas from the whole of the Bible, or, in other words, that wherever a beautiful idea could be culled from the language of sacred allegory, or of prophecy, or of comfort, he repeated it in his melodious diction, and applied it to the scenery of his divine drama. Nor has the price been light that our days have seen paid for yielding to the seduction of Milton. As science has decyphered the stony records of the past,—as we have slowly learned that many of the things long most surely believed among us, are inconsistent with the certain record that God has left of his works,—the creed which rested mainly upon imagination has been rudely shocked, and the pulpit has echoed the accusation that Geology contradicted Moses,—when it only contradicted Milton.

Between the genius of such a poet as Milton, and the genius of such an artist as Doré, no very lively sympathy can exist. That M. Doré should have attempted the illustration of "Paradise Lost" speaks much for his courage. It speaks yet more for his genius that we should have to speak of the work as a qualified success, and not as an unqualified failure. The splendid volume which has been published simultaneously in London and in New York is one of the noblest that has issued from the press. A picturesque life of Milton, from the veteran pen of Dr. R. Vaughan, is followed by a brief introduction to the poem, written in a fair and moderate spirit. The only fault to be found with the letter-press is the frequent deforming of the page by notes, as to which it is difficult to conceive what class of readers they are intended to benefit. It irritates the eye to be attracted from the even flow of the metre of Milton to receive the intelligence that "grand parents" means "first or great parents;" that "witnessed" means "expressed;" that to "suffice" means to "satisfy." Such comments are rendered the more inexcusable by the great beauty of the page, and the injury which it suffers from the small type of the impertinent and idle comments. There is no list of plates, — an omission the more to be lamented as the order of their insertion is not that of the numbering engraved on their margins; so that it is only by counting them one by one, and by assuming that the copy consulted contains all, that we arrive at the number of fifty. Of these fifty plates we have a few words to say, regarding them as naturally consisting of six several groups.

The drama of "Paradise Lost" is mainly divided into the two distinct series of human and superhuman action. To the latter class of scenes M. Doré has devoted more than half of his designs, no less than twenty plates giving the fall, the struggles, and the councils of the evil angels, and five being devoted to the denizens of Heaven. A difficulty of great magnitude awaits the artist at the very threshold of his task. We can present to the imagination flying anthropoid forms under one of three possible suppositions. We may conceive the human body to be raised by the direct exertion of some occult spiritual power, such as is attributed by the Roman Church to the ecstasies of her saints, and is represented by the great Italian masters in the Apotheosis of the Virgin, or the rapture of St. Paul. Such, too, were the classic representations of the gods, whether arriving, like Iris, with a message from Olympus, or fading from view like the Venus of Virgil from the side of Æneas. The classic artists never gave pinions as instruments by means of which celestial beings passed from earth to heaven. Wings with Phidias and his contemporaries were symbols alone, given to Victory and to Love, indicating in Psyche the resurrection of the soul by the allusion to the butterfly, bound on the talaria, the caduceus, and the petasus of Mercury, and shading the madness of Medusa; but in none of these instances are they presented to the eye as the mechanical instruments of flight. Christian art, improving after its fashion

on the men in white garments seen by the apostles, and on the earlier messengers from heaven, whose nature was recognised only on their departure, peopled the sky with repetitions of the classic victory. The artist who follows in this inartistic course has to contend with the impossible. The more profound his knowledge of anatomy, and his sense of weight and of poise, the more impossible is it for him to satisfy himself with the delineation of figures supported and moving in the air by the mechanical agency of wings. His angels writhe, and flap, and flounder,—but fly they do not. The wings are inadequate to the weight of the figures, the positions assumed are not those which are consistent with their flight; and yet the simple idea of the ancients, the wingless volitional flight of which we are most of us conscious in dreams, is forbidden by the introduction of these unmanageable pinions. It is true that a third method may be drawn by fancy from the analogy of nature. If we suppose the angelic forms to be destitute of gravity, or, rather, to possess the specific gravity of the surrounding atmosphere, we may consistently regard them as hovering around, and we may then imagine the wing to be employed, not as that of a bird to sustain weight, but as the fin of a fish to give impulse, and the difficulties of proportion and of position will then no longer exist. But in this case the artist must be able at the same time to present to the mind the etherial nature of his celestial subjects, whether delineated by such lines of light as Doré has occasionally and very beautifully employed, or indicated by some effect of transparency or of pervious and aërial structure which destroys the sense of weight. Such an effect, to some extent, has been attained in the outlines of Retzsch. But the very accuracy of the drawing of Doré is opposed to this mode of eluding the difficulty, and the eye accustomed to the requirements of physiology and to the observance of the laws of dynamics will, for the most part, wander ill content through the winged hosts that soar or that struggle on his pages. The happiest exception to this criticism is to be found in the group of angels circling in chorus of praise. In this plate the aërial poise of the figures is most masterly, and yet it will be observed that the most perfectly floating figure is one without wings. The effect is no doubt heightened by the absence of any ground-line. There is not, however, a single beautiful face in the group, and the two undignified figures in the centre will not find favour with many English readers of Milton. Again, in the flight of Ithuriel and Zephon round the Garden, we have eagerly-moving, well-poised figures, the sense of mechanical weight being relieved by a delicacy in the treatment of form and of drapery that suggests an ethereal nature in harmony with the posture of the angelic guards. The direction of the main lines of the figures in this plate is signally skilful and happy. We cannot say as much for that which has been selected by the publishers as the sample to adorn the prospectus, the Descent of Satan towards our world. The body of the fiend is palpable and material; indeed it seems as if the artist had purposely sacrificed the aërial lightness of the figure for the better intimation of his moral character. For the same reason, we presume, his attributes are gradually changed; the feathered pinions degenerate into bat-like wings, the feet turn into hoofs, horns appear in the later scenes, and the armour and clothing of the Archangel is gradually laid aside, so that in the most carefully-drawn of the representations of Satan, in which he *sits* contemplating the Serpent asleep, the highly-finished figure is perfectly nude. In the flight towards earth, the apparent weight of the body is such as altogether to overpower the foreshortened wings, and the effect of the figure, carefully and accurately drawn, is that of a tumbler, the backward movement of the foot rendering the unpleasant conclusion irresistible. In this plate, moreover, is to be noticed an oversight most rare in the works of Doré. The small size of the globe of earth is, of course, intended to denote its distance from the fiend, and the effort which the observer has to make, is to realise its position as a planetary body, delineated as we sometimes see the dark side of the new moon by earth shine. But this illusion is dispelled by the shadow which a cloud, so near to the eye that we detect its structure, casts on the very body of the planet, thus entirely destroying the sense of distance.

More imaginative, but, we think, less successful than the angels, are the marine monsters evoked from the abyss by the wand of the artist. The revelations of paleontology might be studied with profit by M. Doré, with benefit to his own future works, and with great benefit to the geologist, who might hope for a better rendering of the forms of those extinct monsters, of the anatomy of which so much more is becoming known than is at present to be learned from any attempted restorations. In the work before us, the Leviathan, though wonderful in its rendering of the idea of length, is neither a dragon nor a fish, but a gigantic Proteus or Syren. Its head is decidedly that of one of this batrachian family, and the position of the second claw renders the succeeding length of tail homologically impossible. Of the dragons that fill the hall of Pandemonium, we can only say that they are diabolic, as no doubt they were intended to be.

In the third group of plates, those presenting single figures, or groups of two or three carefully elaborated forms, we must note the draped sworded figure in the group of Sin and Death, as meriting the appellation of sublime. Death, we cannot doubt, is the subject; but if so, the companion figure by no means will answer for the representative of Sin. The first plate, where the fallen archangel uprears himself from the gulf, gives one of the finest single figures in the book; but here, again, the recumbent figure bears so close a resemblance to the succeeding representations of Satan, that we are in doubt as to the meaning of the artist. In the clambering of the fiend over the wild and fearful rocks of another plate, we again are made to feel that a figure armed with such wings could not have been so painfully dependent on his hands and feet. The most carefully finished of all this series of plates is the one to which we have before referred, of Satan seated and contemplating the Serpent. The figure is superb; but the head, though a fair representation of the monkish Satan, falls far below the dignity of the Archangel of Milton.

Apart, in their idea and composition, from the other groups of designs are the three episodical plates of the building of the Ark, the Deluge, and the Descent of Moses from Sinai. The first of these gives one of the striking contrasts of light and of shade so characteristic of this remarkable master; although the size of the vessel, of which the ribs stand out black against the sky, is but that of an ordinary bark. The patriarchal figure with the frame-saw is evidently unaccustomed to the use of that implement. The Deluge recalls the plague of darkness in Egypt. The figure of Moses, though small, is fine and dignified.

In approaching that division of the designs in which the chief human interest of the work centres, we desire to keep as free as possible from any disposition to carp or to cavil at the works of a great artist, the feeblest of which possess much to excite respect and admiration. Yet it is impossible not to feel that the very truth and accuracy with which M. Doré represents nature as he sees it, has excluded him from the Eden of Milton. In almost every instance in which he has drawn the inhabitants of the fairy scenes which he conjures up, we feel that their eyes have been opened. There is a sense of something slightly uncomfortable or improper clinging to the figures—they are not unclothed, but stripped. The feet, too, of Eve, have evidently not only been shod, but seem never to have been otherwise than well and luxuriously shod,—they are not the feet of a woman who walks barefoot. The attitudes of Adam, true as is the drawing, are those of a model. There is one perfectly unconscious Eve,—the one asleep; but the figure, though an admirable representation of a sleeping woman, is not that of a beautiful woman, nor of one whose attitudes are instinctively graceful. The face never is beautiful. In the scene in which the pair are listening to the recital of the angel, that of Eve is from a fourth to a fifth larger than that of Adam. Had M. Doré filled his memory with glimp-es of the unclothed tribes of Africa, with the dances and the bathing, not of negroes, but of the well-formed races that resemble animated bronze, and that regard clothing as an impertinence; had he even lingered by the side of the Mediterranean during those hot months that drive strangers to the north, and natives to the sea, his truthful pencil would have limned noble, free, unconscious forms, clothed only in their native grace, and thinking no more of drapery, or of its absence, than do the antelopes or the swans.

Among these groups it is a pleasure to dwell on one that affords room for unrestricted admiration,—that in which the approach of the angel through a glade, throwing the glances of his own light on the seated figure of Eve, unites the charm of landscape, of figures, and of that effect of light and shade in which Doré so eminently excels.

We have reserved the landscape for the last. Although not equal to the wonderful tropical scenery of the Atala of the same artist, they are generally charming. The separation of the waters in the second day of creation is the finest representation of a chaotic scene with which we have ever met. The river pouring into Paradise is a study, and a marvel of rush and movement. The evening of the sixth day, although it suffers from the fidelity of the artist to that description of the poet which cannot be graphically represented without exciting a feeling of incongruity, is another scene of great beauty; and the two recumbent elephants, in especial, are wonders of animal life. Above all, the representation of the fifth day, the sharp lines of the engraving, and yet the effect of river mist and the aërial perspective which they afford, the delicacy of the plumage and the grace and truth of the forms of the birds, the harmony of the rustic landscape, present a scene in which we find no element of discord or room for hesitating admiration. Nor must we omit to mention the wonderful train of angels descending after the fall, although the human figures in the scene are disagreeable; the departure of the angel into heaven, where the fading form of light is watched from the bower of Adam; or the steady, evil, terrible progress of the Serpent towards his unconscious victim. In these eight plates alone there is enough food for admiration to render the volume worth the purchase of those who can afford the price.

We would offer one word of suggestion to the gifted artist, and to his enterprising publishers. For the prolific pencil of M. Doré we can only express two wishes; one, that it should ever and anon be dipped into fresh scenes of living nature; that the artist seek, at times, repose from his labours in travel, especially in eastern or in southern travel; and secondly, that it should be employed on subjects of a nature germane to the genius of its master. There are two English poets who come much more naturally under this description than does Milton. The illustrations that Doré could give us of the "Faëry Queen" might combine all the excellences of his best works. Satyrs would peep through the ivy, and the quaint tilting armour of the fifteenth century would gleam on the magic page. And for a Christmas book for 1867, leaving aside the historic plays, which the patriotism of a Frenchman would forbid him to illustrate to our satisfaction; avoiding Falstaff, so eminently English; if we turn to the scene in which Shakspeare gave the reins to his imagination, we shall have all that the artist needs. No work that ever issued from the press ought to exceed the beauty of the "Midsummer Night's Dream," illustrated by Gustave Doré.

THE DESIGNS FOR THE NEW NATIONAL GALLERY.*

IN our last number we described the several designs of two of the competitors, for the enlargement or reconstruction of the National Gallery, and for a building nearly or entirely new; and we noticed the design for the enlargement, by a third competitor, Mr. Street; whose views as to lighting, principles to be observed in planning, and style or decorative character, we adverted to. We have now to describe the design for a new building by this last-named competitor.

As Mr. Street does not deal with the site of the barracks, we shall be spared trouble in description. On the ground now occupied by the workhouse his plan shows an open court; which, as may be understood, is not rectangular. The entrances to the building are, advisedly, two only; and they are placed, one, as directed, in the centre of the chief front, and the other at the north-east angle of the ground. The chief features of the front towards the Square are a lofty dome, in the middle of the range of building, and an advanced porch,—the latter, from its doorway and other features, very ecclesiastic in character. This porch is tripartite on the ground, and in arrangement of its roofing. It is flanked by circular features of the plan, which are dome-capped; and the general parapet would

* See pp. 23 and 40, *ante*.

stop upon the curve, in the case of each of these small domes, in an unsightly manner: had the drawing been correct, this would have been observed. From the porch, the entrance leads into a groined hall under the large dome. The floor here is 6 ft. above the pavement outside. Opposite the entrance, is a doorway from the hall; whilst flanking this doorway are the commencements of two flights of stairs which afterwards run parallel with the transverse axis of the building, and lead to the floor above. There is a considerable slope upwards from Trafalgar-square to Hemming's-row; and instead of getting all his steps in the front, Mr. Street raises the floor-line of the portion of the building on the new ground, and places steps to the doorway from the hall. The several features of the hall are shown in one of the effective views that Mr. Street knows how to make. Right and left of the hall are the galleries for the drawings. The ground-floor, including the rooms round the quadrangle, according to Mr. Street, should provide also for the National Portrait Gallery, for engravings, and perhaps for an art-library; and we hope that the two latter requisites in a National Gallery will not be omitted in the building that is to be built. The wing to the west of the hall contains the rooms of the keeper's residence, and others. These are arranged in two floors; and the division is masked externally by a transom of tracery, which is repeated in the other windows of the front. The external decorative character of the wings is produced chiefly by a range of arches. These arches spring from columns: they carry gable- or canopy-mouldings; the columns carry tabernacles; and the arches, or bays, enclose besides the windows, traceried, to which we have alluded,—and which are coupled,—certain openings, apparently not to be glazed, that would light a corridor which is external to the line of galleries of the first floor. These corridors, with others, are intended to assist the free circulation of crowds; and this point seems to have been well studied by Mr. Street. His Trafalgar-square front, however, is anything but satisfactory: indeed, it is open to some of the gravest charges that the Gothicists have brought against Classicists. It reminds one of a church that has lost an aisle, where piers and arches have been filled in with new walling and windows. The portion of the front that is most satisfactory is the dome, with its octagonal tambour decorated in a manner that recalls Pisan models, and with a clever setting of the octagon upon the square of support, aided by pinnacles at the four angles. Before leaving this front, let us say that Mr. Street would introduce a flight of steps in the middle of the terrace of the Square. He advisedly dispenses with railing like that enclosing the front at present. We have no space to describe the end- and rear-fronts; though these contain parts that are sufficiently picturesque. Amongst them is a feature that is placed in a re-entering angle, near to where the raking line of St. Martin's-place and the line of the main frontage meet. Another feature forms the north-east angle of the whole building, where the secondary entrance is: here the roof is carried up; the staircase is reflected in the stepped arrangement of the windows; and there is a cluster of tabernacles, or niches and sculpture, on the angle. In the east front there are arches, but somewhat different to those of the chief front. All the galleries of the ground-floor are side-lighted; but the disadvantages, comparatively, of the system, are sought to be overcome by giving great height to the rooms. This would increase the number of steps; but Mr. Street shows that his design has not more steps to the principal floor-level than there are in the cases of the Dresden, and the two Munich galleries. On the principal floor, the galleries occupy the four sides of the quadrangle (or including the galleries in the eastern half of the main front) and the western half of the front. The 50 ft. galleries are top-lighted; and, in the main front, the light to these galleries, by an arrangement of the roof, not appearing towards Trafalgar-square, is taken from the north. A double skylight is rightly deemed essential. Alongside of the large galleries, in most cases, is a range of galleries for the cabinet-pictures; and these latter galleries, which are side-lighted, are placed in two stories, that is, two in the height of one story of the large gallery. The opportunity for making this economic arrangement is certainly an argument for the side-lighting system, albeit not conclusive. The galleries for cabinet-pictures are divided into compartments by screens, which are 15 ft. in height.

Mr. Street's pamphlet testifies to attention that he has given to the subject of picture-galleries, aided by examination of such galleries as there are at Dresden, Berlin, and Munich. Besides general features, he has attended to details, as the provision of a lift for pictures, of closets in the walls below the pictures, and of receptacles in connexion with dust-shoots, for the sweepings of the floors. As to the 50 ft. width, prescribed, he, in common with so many others, thinks it excessive. He would have no gallery more than 40 ft. to 45 ft.: he points out that the Dresden Gallery is only 31 ft., and the Pinakothek at Munich about 38 ft.; and he justly says that the increase of height in top-lighted galleries, operates not for the advantage of the lighting, but as a temptation to hang pictures where their finer qualities cannot be seen. He differs from several of the competitors in one respect: he provides no sculpture-gallery. He regrets the omission; but he thinks, were sculpture provided for, that sculpture and paintings should not be brought close together: according to him, the effect "is generally found to be conflicting." Comparing his provision of space for paintings with that in other galleries, he gives some useful particulars of the galleries at Dresden, Munich, and Berlin, from his measurements; though we see that his dimensions are only those of *floor*-space. The Dresden Gallery he considers the best of the number,—that is, four, counting two at Munich. At Dresden, the gallery-floor contains 24,700 ft. The ground-floor is appropriated to engravings and casts. Of the floor, or floors, alone appropriated to paintings, 8,700 ft. are top-lighted, 8,000 ft. are side-lighted, and 8,000 ft. in the upper cabinets are top-lighted for the most part. None of the galleries are more than 46 ft. 6 in. in length by 31 ft. 2 in. in width; whilst the cabinets are generally each 14 ft. 6 in. by 16 ft. The Pinakothek Gallery at Munich is badly lighted: the cove is too large, and the skylight too small; whilst, as there is no second skylight, blinds are necessary to exclude the sun; but which then exclude light. The entrance at the end of the gallery, instead of in the middle, is said to be the cause of unnecessary traffic through the rooms at Munich; and the cabinets, 12 ft. 6 in. by 17 ft. 6 in., and 12 ft. in height, seem to be too small and too low. The Berlin Gallery, of recent erection, Mr. Street supposes to be the worst-contrived in Europe. As to the Louvre, he mentions Sir Charles Barry's estimate, 62,000 ft., and that given in the Summary at the end of the Appendix to the Report of the National Gallery Site Commission (1857), which was 80,000 ft.; but he is not disposed to place any reliance on the dimensions in the Summary. The area of the exhibition-rooms in the present National Gallery, he gives as 9,734 ft., and that in the Royal Academy as 7,462 ft.; which would make a total of 17,196 ft. The area provided in Mr. Street's design, of course excluding corridors, keeper's residence, offices, and the like, would be:—

	Sq. Ft.	Sq. Ft.
On the Gallery-floor:—		
Principal Picture-galleries	38,859	
Cabinets on the gallery-floor	8,410	
Do. on floor above the gallery-floor	8,934	
Total		56,203
On the Ground-floor:—		
Turner Gallery	1,680	
Gallery for Drawings of old masters, and exhibition-rooms	11,679	
Water-colour Galleries	5,899	
Library or Drawings (Eastern Gallery)	3,467	
National Portrait Gallery	8,056	
Total		30,781
Grand total: Floor-area of Rooms for Pictures and Drawings		86,984

So that, without building on the barrack-yard, the ground would allow, according to Mr. Street, on the gallery-floor alone, space exceeding by about 46,500 ft. that now provided in the National Gallery, or space about equal to that of the Louvre galleries. We give these dimensions without thereby intending at all to designate Mr. Street's design as that which should be selected, and without feeling that we are bound to give the estimates of other competitors. Neither can we enter into any comparison of figures; though we must point out that it is one that the judges are bound to make. We give the estimate for whatever interest it may have with our readers, and as affording some approximation to an idea of what the future building may be, as to the provision for pictures. We would, however, observe that difficulty of comparison, for the judges or ourselves, is occasioned by the differences of reading of the "Instructions," as to what works of art space had to be provided for. Here, indeed, "Instructions" should have been definite. As the case is, some of the competitors provide for sculpture, inclusive of antiquities from the British Museum: others exclude sculpture entirely, or in the main, but include the National Portrait Gallery; whilst some express an opinion, not without grounds, that a collection like this last, which is interesting not chiefly in connexion with the art of painting, but otherwise, should be excluded from a gallery of art-works. We may add that Mr. Street estimates his building as likely to cost 374,000*l.*, inclusive of 25,000*l.* for sculpture upon it.

Mr. Cockerell's designs are three in number, and are marked No. 1, No. 1 A, and No. 2. The drawings are somewhat mixed together in the Gallery, as compared with those of designs of other competitors. The design for altering the present building is the No. 2. The design No. 1 A, however, retains the portico of the centre, and would use again the columns, pilasters, and entablature of the present front; whilst by a slight modification in the arrangement of the decorative features, the existing galleries might be preserved. No. 1 is the design for an entirely new building. Galleries on the site of the barracks are shown on the plans; but description of the designs should here exclude them. The design No. 2 would involve but little pulling down of what is existing. The present dome and the "pepper-boxes," would be removed; and there would be added an attic and two domes in the centre, and two other domes to the wings, making four domes to the front. These domes would be carried on columns or iron-supports. The arrangement would involve the removal of the present staircases, and construction of a new staircase. The attic would be decorated with terminals or caryatides; and round the springing of each dome, or upon the tambour, would be obelisks. The galleries in the new ground would be the same as in the designs "1" and "1A," (which we are about to describe,) excepting as to a slight difference in the matter of floor-levels.

In design No. 1A, the dome and the lanterns of the wings are removed as before; but, whilst the present portico is in fact retained, a very different character is given to it, as also to the rest of the building. We should mention that the two staircases are not retained; but that in the centre of the front-range of building, a large staircase-hall is planned, with balconies round, which are reached by three different flights of steps from the landing between the stories; to which landing there is a single flight opposite the entrance. One of the three upper flights, without turning from the landing, leads straight to the new galleries on the line of transverse axis of the plan: the other upper flights, returned back, give access to the balcony-landing; leading from which, the galleries of the front are entered. As regards the portico: for the present podium-wall are substituted an upper and a lower stylobate; the latter being a continuation of the same feature, which is added to the whole length of the building, and is rusticated with horizontal channelling; whilst the upper stylobate, to the portico itself, has ordinary cornice- and base-mouldings of a pedestal. Flanking the portico, and not interfering with its columns at the sides, two-storied and dome-capped masses, square on plan, are added to the main line of the building: in these are the entrances, flanked by salient columns; whilst the upper story is pilastraded, and contains niches. Between these two masses, and forming the back-ground to the roof of the portico, there is an attic-wall, with niches; and above and to the rear of this is a square mass, slightly enriched, enclosing the upper part of the central space of the staircase-hall. The order is continued to the ends of the building: the columns here are salient; and they stand on the bold set-off or base which corresponds with the lower stylobate of the portico. The salient portions of the entablature, over the columns, carry scroll buttresses to an attic; and upon the latter are vases. From behind the attic rises the steep slope of the curb-roof. At the ends of the front, however, masses are carried up higher than the general line of attic, or as pavilions. Decoratively, they add a super-order to the main order,—their features being pilasters, and salient columns carrying a central pediment in each face, besides niches. As termination to the whole, there are obelisks,—which Mr. Cockerell seems to be enamoured of. A good termination, other than a

statue, to the piers, or pedestals of an attic, of a building of the classic character, still remains to be designed. The intercolumns of the main order in this design, are filled with very lofty windows, each with a pediment, and a decorated mullion-and-transom window-frame. On the whole, we prefer the design to the No. 1. The description of the plan and arrangement of this last-named will answer for No. 1A, with the exception of what is connected with the staircase.

In his design No. 1, Mr. Cockerell, like so many of the other competitors, has adhered to the raking lines of the ground, next Hemming's-row and St. Martin's-place. To avoid the eyesore of acute angles he has substituted for them, circular forms on plan, on the principle observed in the triangular block containing the Lowther-arcade, in the West Strand. This very arrangement, however, as to the north-western angle in Hemming's-row, would become a defect in the event of a prolongation of the line of building, westward: indeed, this appears in an elevation which shows the combined or extended frontage. We may confine description, as in previous cases, to the design non-inclusive of any buildings on the site of the barracks and barrack-yard. The lines of the chief frontage are the same as in the present building, excepting that the general line for the wings is advanced 4 ft. This would preserve a view of the portico of St. Martin's Church, to any spectator standing at the portico of the College of Physicians, or at some distance westward on the opposite side of the street. One competitor, whose design we have to notice, felt so much doubt as to the interpretation of the "Instructions" on this point of the view of the St. Martin's portico, that he has prepared alternative plans. Mr. Cockerell's building would be entered, in the middle of the front, through a loggia of arches approached by side-flights of steps. This loggia has five arches in front, and has one arch at each end, or to the projection from the main line of building. Arches corresponding with those of the loggia are the chief features of the general front; where, however, they are filled in with walling containing window-openings. All these arches rest on a podium, channelled horizontally, and pierced with circular openings at long distances. The arches of the loggia and front have no imposts or consoles. In their spandrils are wreaths. The piers have some kind of cable-formed decoration up the face of each. They stand on dwarf-pedestals of peculiar appearance. The ends of the loggia break forward slightly in front, and on the returns, to form square masses on plan: these carry dome-capped turrets. From the loggia the way leads into a circular entrance-hall; from which stairs lead, right and left, to galleries of the principal floor; and from which the galleries on the transverse axis of the plan are entered. The entrance-hall has an opening in the centre, in the ceiling, for light from the hall above. The latter hall is lighted, through a domical ceiling, from openings in a lofty outer dome which is the main feature of the building externally. We must say, however, that the external dome has been made an inelegant feature. The external details generally of the "Design No. 1" are inferior to what Mr. Cockerell can accomplish; but those of the tambour of this dome—a sort of "Debased Italian"—are really bad. They are as inferior to much of the work of the period of the original "Debased Italian," as work of a village-mason striving to imitate that Italian, might be to the original. As to the dome itself, the openings proposed to be filled with glass-tiles,—by which means, according to Mr. Cockerell, "the effect of a conservatory would be avoided, and the dome would have a solid appearance,"—would not in our opinion conduce to the solidity or other ingredient of the effect externally. Internally, as to the domical lighting of the circular hall and the decoration, the case is very different. The ceiling, or vault, is divided into two parts in the height, by mouldings. The lower division, which is entirely decorative, presents, at the base, a series of lunette-spaces enclosing sculpture in relief: above these are circles enclosed by wreaths of laurel, and containing portraits of celebrated artists: in the intermediate spaces round the springing, are winged figures holding the wreaths; and ornamentation is carried up as support to the dividing-mouldings before mentioned. The space above, to a central "eye," is divided into compartments; and these are filled in with large panes of glass in bars arranged on a geometric pattern. The "eye" is capped by a small lantern. On the walls, in the drawing, the Cartoons are shown; but these works would surely be too large, either singly, or altogether, for any hall of no greater circumference than that which Mr. Cockerell proposes. Round the well-hole aperture in the floor, there is a seat; which is made an architectural feature. The entrance-hall below is divided by columns of the Phigaleian Ionic order. Besides the features of the exterior that have been described, there are pavilions to the ends of the front, somewhat as in the other designs. They have rusticated piers, and an emphasized centre, and pediment, in the lower part; whilst there is, in each case, a super-order of columns and pilasters, with arches, and niches; the whole being crowned with vases and obelisks. The general front, or between the wings and centre, also is terminated by vases, on an attic; and there are obelisks to the angles of the turrets in the centre. The lunette-spaces in the arches of the front are filled in with what seem to be raised panels. The best bit of contrivance in the exterior is comprised in the arrangement of the steps to the entrances. In this design, as well as the other, there is almost too much of building up, merely to get sky-line: indeed, this is becoming a common fault: it is seen in several designs in the Gallery. Mr. Cockerell's masses above the general cornice-level, as in the case of the pavilions at the ends of his front, are indeed enclosures to portions of the actual height of rooms in that part of the plan. But the idea of two stories internally, is given by the exterior; and the question is whether the actual arrangement, of square halls at these parts, which are of greater height than the galleries intermediate, is not what should appear. In the arrangement of the galleries and rooms, taking in the new ground, a four-sided central space is first enclosed by buildings which follow the lines of the ground; and the enclosure is then divided so as to leave four courts, by galleries. Of these galleries, those parallel with the front are of but one story in height, and are lighted from above. The principal galleries are, of course, 50 ft. in width; but there are others narrower. The angles of the rooms are generally cut off, so as to allow pictures to be shown the more advantageously. Side-lighting is designed for galleries which are to contain cabinet-pictures, as also for all galleries of the ground-floor that have other galleries over them. Some portions of the plan are arranged with galleries in which are screens that are at an angle with the wall wherein the window is. Mr. Cockerell rightly advocates, and has provided in his plan, large and small rooms alternated; and he quotes Eastlake and Dyce in arguing that small pictures should not be exhibited in the same rooms as large ones.

The observations of these authorities (in a report on the lighting of the Taylor and Randolph Galleries at Oxford) have also led him to suggest a system of top-lighting modified from that one wherein a horizontal screen below the skylight is a feature; though, in his drawings, he adopts the South Kensington system, to which the attention of the competitors was called. The principle is the same as is exemplified in one of the galleries at Munich; of which gallery one of the competitors in the present case adopts the arrangement nearly. The arrangement advocated by Mr. Cockerell has for its chief feature the lighting the pictures by a direct light from the ceiling; whilst the source of light is in some measure screened from the eyes of the spectator by a breadth of central *plafond*, the length of the gallery. One objection brought to the Munich arrangement being that the result is the tricky effect of a panorama; he believes that he avoids this by leaving the ceiling at the level of the top of the cove, or little lower, instead of bringing it further down; whilst he proposes to form his ceiling with thick double-ground glass, so as to relieve the heaviness, whilst preserving the effect. A curtain would be hung in summer, from the apex of the outer skylight, or dividing the roof-space above the ceiling into halves, to screen the direct rays of the sun, without detracting from the light. The intersections of the smaller galleries are made very effective by the use of an arrangement of domical light, similar to that of Hanover Chapel, Regent-street. We should mention that the space for pictures in this design is estimated as, on the ground-floor, 1,360 lineal feet of wall-space, and 2,004 ft. of screen-space; and as on the principal floor, 3,644 ft. of wall-space, and 620 ft. of screen-space: the total being 7,628 ft.: but to this may be added 550 ft. of screen-space in a second-floor gallery that there is towards Hemming's-row; and which is suggested as suitable for the National Portrait Collection. The building is estimated to cost 269,000*l.*; whilst for No. 1A the amount would be 251,000*l.* Design No. 2, retaining the existing building, would be 143,500*l.* Mr. Cockerell proposes no alteration in the Square: indeed, the competitors who suggest alteration are fewer than we at first supposed.

We have still to notice many of the designs.

ON THE CONSTANT SUPPLY OF WATER FOR LONDON.

THE City Officer of Health having pronounced so strongly as he has done against the practicability of a "constant" supply of water for London in lieu of the "intermittent," it was desirable that some one who could speak with authority should say what there is to be said on the other side. This was done on Monday evening last, at a meeting of the Health department of the Social Science Association, by Mr. Bateman, C.E., who has constructed, in whole or in part, the waterworks of some twenty-five or twenty-six different towns and cities, varying in size from 7,000 to 600,000 persons, and containing a gross population of upwards of 2,000,000. In all these towns there are, we believe, but three which, at the present time, give an intermittent supply of water, and these are towns in which waterworks existed previously. In one of these, the town of Belfast, the system will be discontinued as soon as new works now constructing have been completed. In many places, and most importantly those of Manchester and Glasgow, the mode of supply has been changed from the intermittent to the constant system, and it was his experience specially with reference to these cities, and the change of systems, that he laid before the meeting. We give some passages from his address.

The question of constant supply is one which most materially affects the comfort and convenience of the poorer classes, and the inhabitants of smaller houses. In larger houses ample cistern space is generally provided to secure the equivalent of a constant supply; but where water is constantly laid on from the street mains there is scarcely any occasion for house cisterns, except for the supply of water-closets. By proper arrangement, little or no inconvenience is experienced from the occasional shutting off of water for the changing or attaching of house services. The first cost of introducing the water to the houses is reduced to the lowest possible point, and the pollution which more or less commonly attends the storage of water in house cisterns is entirely prevented; the water is delivered in the purest, freshest, and coolest condition; and very much of the annoyance and inconvenience arising from frozen cisterns and burst pipes, which are the common attendants of the winter season, is avoided. There is no occasion for exposed pipes in out-of-the-way places, for cisterns in roofs or the tops of the houses to be filled with soot and dust in summer and to be frozen in winter,—and a man may live in tolerable comfort without the dread of the water bursting above his head, and deluging the apartment in which he resides. But the advantage of constant supply to the consumer has been so often and so clearly demonstrated, that it is useless to dwell further on this branch of the subject. The question of its adoption does not entirely rest with the consumers; but with those who have to provide the water. It is believed by many that the consumption under the constant supply system is so great that no company or waterworks can meet the demand,—it would be ruin to them if they attempted it. I cannot but think that all this is a delusion,—it is not that more water is actually consumed for the use of the individual under the one system than under the other; but that the amount of *waste* which results from bad pipes and bad fittings constantly supplied with water is so great as to occasion serious loss and inconvenience to a water company, and perhaps in some cases to exhaust their supplies. The experience of those towns where the supply has always been on the "constant system," and where every precaution has been taken for the purpose of securing good workmanship, the best and strongest materials, and the most improved apparatus, the consumption of water per head is certainly not more, probably less, than it is in towns similarly circumstanced in all other respects, but supplied with

water on the intermittent system. This is abundantly proved by the statistics of water-supply in such places. For instance, the average consumption of water in the manufacturing towns of Lancashire and Yorkshire is from sixteen to twenty or twenty-one gallons per head per day for all purposes, including trade, and of course, all the waste which may be taking place. In Manchester, the quantity consumed by about 600,000 persons, and by the trades demanding water within the district supplied, varies from 12,000,000 to 13,000,000 gallons per day. Of this quantity it is estimated that one-third is supplied to manufactures, leaving the net quantity consumed for domestic purposes, including waste, fourteen gallons per head per day.

The experience of Preston, Blackburn, Bolton, Stockport, Halifax, Warrington, and all the other manufacturing towns in the north of England is identical with that of Manchester; and if this be compared with the consumption which obtains in towns supplied under the intermittent system, it will be found that scarcely in any case does the supply fall to so low a point as under the constant system.

In London it is thirty-two gallons per head per day, and in Plymouth, Devonport, Shrewsbury, Oxford, and other places supplied on the intermittent system, the consumption amounts to thirty gallons or more per day.

The quantity required in different towns no doubt varies according to the class of inhabitants, the circumstances, and the habits of the people; and it is universally found that where water-closets exist as a general rule, the consumption is greater than where they are comparatively absent.

At Newcastle-on-Tyne the water has always been delivered on the constant supply system; but the consumption gradually increasing to an extravagant point, a vigilant inspection was introduced, and means taken for checking the wasteful expenditure of water, sufficient powers having been granted to the company by a recent Act of Parliament, and this was effected to a great extent.

Shortly after the introduction of a new and ample supply of water into Manchester in the year 1850, the old system of intermittent supply was superseded by that of the constant system; but it was only gradually introduced. The city was divided into small districts, and all means were taken for seeing that all the pipes and water fittings were of the best description, and suitable for use under the constant supply system before the inhabitants were allowed to enjoy that advantage. At my suggestion, the corporation in whose hands the water supply was, adopted the plan so successfully pursued in other towns of being their own plumbers; but the clamour and opposition of the plumbers of the city was too much for popular representation, and the system was gradually relaxed. They discontinued the plumbing, but they established a warehouse or shop for the sale of fittings, purchasing the very best, and, as far as possible, compelling the plumbers to purchase from them, allowing the adoption of none which were not approved.

After a time this was discontinued, and a certain number of plumbers were licensed or authorised to do the requisite work on certain conditions, with which they were obliged to comply. These regulations are still continued, and there is probably no great water supply in the world which is administered with as little waste and with as much convenience and comfort to the inhabitants.

It will be thus seen that where everything is in good order, and both the water provider and the water consumer do their respective duties properly, there is no disadvantage to either party by the supply of water on the constant-supply system, while the advantage to the consumer in the facility with which he obtains water, and the trifling cost at which it can be introduced into his premises, are incomparably greater than can be enjoyed under the other system. Where, however, the intermittent system has hitherto prevailed, the desirableness, and indeed the practicability, of abandoning it, and adopting the constant supply, depends very much upon the consumers. If they will submit to such regulations as are necessary for preventing waste, there can be no difficulty in introducing constant supply; it will occasion no more waste than the intermittent system. The only changes which are required are the abandonment of all bad fittings, such as common ground taps, leaky cocks, and wasteful water-closets. The cisterns already existing in houses which have been adapted to the system hitherto employed may remain, if it be the will of the owner or occupier that they should. If they are large enough they do now practically give a constant supply, and it is only just to the provider of water that care should be taken to prevent improper use. Those who prefer to abandon their cisterns and to take their water direct from the pipes, can do so at very little expense. In all new buildings there would be no necessity for the expensive paraphernalia of cisterns. A stop-cock on the service-pipe of the house would enable the water to be turned off whenever repairs or alterations were required to be made within the house. Little inconvenience is felt by grouping a number of houses together, commanded by one stop-cock; and, indeed, it may be said, that complaints of inconvenience arising from interruption to the supply of water are scarcely ever heard in towns where the constant supply is at work. If the public will not submit to introduce the best description of fittings, and to prevent waste, and will not subject themselves to the vigilant inspection which ought to be exercised by the provider of the water, and be willing to correct everything which requires correction, it will be difficult, and in some cases impossible, to introduce the constant supply.

I must not omit, however, to notice the great consumption of water which obtains in many of the Scottish towns, and notably in the city of Glasgow. There, under both the intermittent and constant system, the quantity supplied has been enormous; but it is easily accounted for, and might be remedied.

Under the old system of intermittent supply, when the water was pumped from the Clyde, the gross consumption was at the rate of forty gallons per head per day, thirty-six gallons of this being due to domestic consumption and waste, the latter element being mainly chargeable with the extravagant consumption.

After the ill-use of water-closets, one of the great causes of waste in Glasgow was the wretched character and condition of kitchen-taps and the water-fittings generally.

In one tenement, while one careful man wasted nothing, another negligent fellow ran down his sink-stone, for no useful purpose to himself, no less than 850 gallons a day.

This waste is principally caused by the universal custom in Glasgow, of using the common ground-tap—the worst description of tap for water under pressure which can be adopted, and which has long since been exploded in all improved and well-regulated water-works in England.

The total consumption of the city from Loch Katrine and Gorbals together is 22,000,000 gallons a day, being at the rate of about 50 gallons per head, and just twice, in gross quantity, as much as Manchester and Salford take for a larger population.

This case of Glasgow will no doubt be much relied upon by the opponents of the "constant supply system;" but the extravagant consumption is clearly due to causes which may be remedied, and to the fact that the Corporation have never resolutely and perseveringly set to work to apply the requisite remedies. The people of Glasgow look upon Loch Katrine as practically inexhaustible. The works are constructed on a scale for bringing more than twice the quantity now used. They are their own property, and as the water is supplied by gravitation, the excessive waste which takes place costs them nothing at present. In conclusion, Mr. Bateman said, I see no reason to doubt that if in this great metropolis the providers of water and the consumers of water will each do their duty and work harmoniously together, the citizens may enjoy the inestimable benefit of an unlimited supply of water constantly laid on, without consuming a gallon more water, if, indeed, as much as is now supplied by the water companies.

TELEGRAPHIC PROGRESS.—A prospectus has been issued at New York, of an East-Indian Telegraph Company, with a capital of 5,000,000 dollars, for the purpose of "connecting all the principal seaports of the Chinese Empire with the Collins line, across Behring's Straits, with San Francisco and New York and the Russian Government line to St. Petersburg, and with London, Paris, and all the principal cities of Europe." It is stated that there are now wanting only 850 miles of wire to connect New York with Pekin.

ARCHÆOLOGIC ITEMS FROM ROME.

THE immutability of Rome and the absence of all signs even of the life that desires outward improvement or inward progress, seem particularly curious and characteristic, now that such clouds of uncertainty are hanging over her political horizon, and such inevitable destiny of change is threatening to overtake her, whether with or without her co-operation. Amidst all that can be urged against the Papal Government, and whatever the feebleness or inertness that may be endangering its vital interests, there is still a token of some regard for intellectual claims in the activity with which certain antiquarian researches and works for the illustrating of the past are at this moment advancing,—in some instances matured, in others incipient, or but promised. We find the range of catacomb-exeavations continually enlarging; we see at the S. Calisto hypogee on the Appian Way, most interesting among those subterranean cemeteries for art-objects, a set of labourers daily at work, and, in consequence, a daily admission of visitors with tickets; and at the supposed most ancient of all these catacombs, those of S. Priscilla, the diggings are also in continuance, though we are informed (and here is the other side of the picture) that—so little can authorities afford for such undertakings,—not more than sixteen men are actually employed upon all these labours in Rome's sacred subterraneans! It is different at the Palatine, where the works directed by Signor Rosa, in the gardens purchased by Napoleon III., are proceeding with vigour, and where every Thursday brings crowds of visitors admitted by gratuitous tickets. And if, indeed, as Rosa concludes, the vast mass of ruinous substruction, apparently belonging to an extent of terraces, can be identified as the Temple of Jupiter Stator, or at least its enclosed premises, the discovery is indeed important for historic illustration. Not that anything like architectural elevation has been added to the monumental range on the "imperial mount" by the researches of the last year. Some beautiful sculpture-fragments are now on view in the magazine within the gardens; the finest a draped and headless female statue; but surpassed by the antiques now represented here only in plaster, a torso resembling the Faun of the Capitol, ascribed to Praxiteles, and a Cupid with part of the limbs but no head, the marble originals of both which truly exquiste works have been sent to Paris.

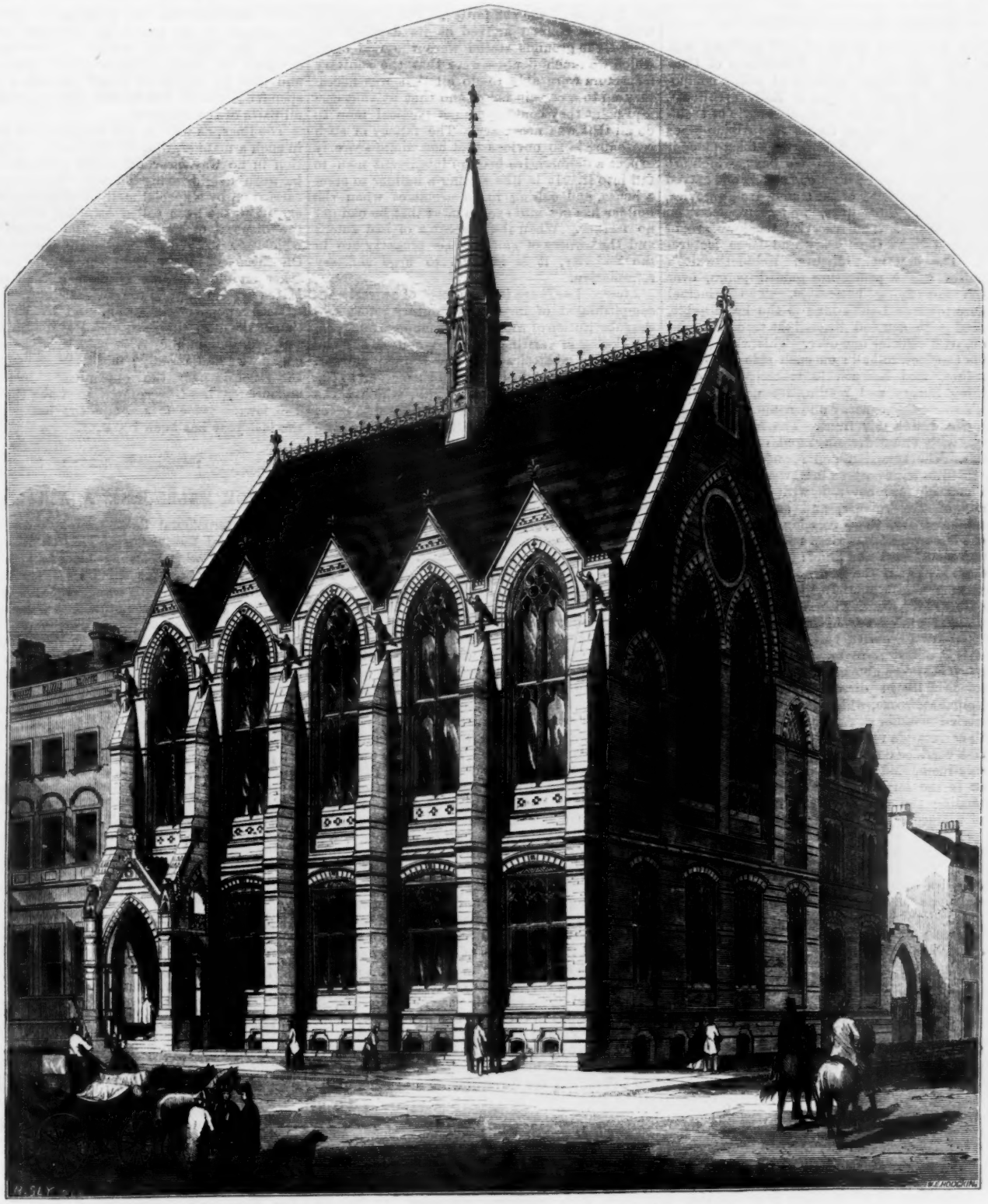
Other antiquarian undertakings lately announced, as ordered by Government, at a meeting of the Roman Archæologic Academy, are the resuming of labours initiated some years since on another part of the Palatine, the slopes and low ground at the north-western angle not included in the Emperor's purchase; also the excavations at Ostia, necessarily suspended on account of malaria during the summer. Signor Guidi (a well-known explorer) is going on, at his own risk, with the some three years since commenced diggings just beyond the southern limits of the Caracalla Thermæ, where the extensive ruins of halls and passages brought to light far below the surface of the gardens that extend round the vast imperial buildings, must certainly pertain to some residence of superior scale and splendour. Five of the chambers, into whose dark interiors we can look through broken doorways orat depths below our feet, are at present explorable, for the sinking in of soil has frustrated much of what the labourers had accomplished, concealed (we are told) much that had been discovered of artistic character; but we penetrate, stooping, into three small chambers under the same span of heavy brick vaulting, on whose walls we see decoration in flowery and foliate designs well preserved on the stucco surfaces. And still more curious are the mosaic pavements of rooms now roofless,—one, in particular, that comprises four large figures, in black and white, and sea monsters, each ridden by a male or female figure almost nude, the designs exhibiting a certain degree of knowledge and spirit; one of the nondescript creatures having a goat's head to a dragon body, another being a robust specimen of the sea-centaur, half man, half dragon.

In dirty and dismal Trastevere, within the area of a wretched little court, amidst squalid cottages, near the old church of S. Crisogono, we find another excavation for antiquarian interests lately begun by a Signor Gagliardi and another proprietor, also at private cost and risk, which has resulted in the uncovering of a great extent of walls in good (though not the best) ancient brickwork, tra-

CHURCH INSTITUTE, LEEDS.—*Interior of Lecture Hall.*

versed by two archways of large tiles above entrances into chambers, identified as a military station of the Vigiles, and reported to be that of the 7th cohort belonging to that corps; the interiors here opened being still adorned with some frescoes on walls and some mosaic pavements, but not, we regretted to find, accessible at present, owing to a similar disaster as at the other newly-opened ruins,—the sinking of the soil so as to fill up the areas just cleared out. In their present state we look down upon these structures as they rise against one side of an oblong excavated space; and if the parties interested can obtain permission to extend these diggings after the demolition of some paltry houses above, greater results may be expected. Near them rises another ruinous wall in the same ancient brickwork, with the traces of a vaulted chamber leaning to the outer side, high above, and enclosed within the filthy court of a small house,—probably another remnant of the Vigiles' station, which has long stood conspicuous, but scarce noticed in this wretched Trastevere quarter. Visconti has written a full report on the discoveries of this site, to be read, in translation from the Italian, to the English Archæological Society.

As to the proceedings of that still youthful association, we have to report signs of activity, and things that promise. The nucleus of an archæological library, hitherto collected through donations, has been formed, for the use of its members, at the consulate, the place of rendezvous hitherto. Within ten days we have attended, since the 28th of December, two meetings, before numerous audiences at the same English consulate, at the first of which Mr. Shakspear Wood, the sculptor, and secretary of the same society, read a paper "On the Appian Way," translated from the Italian of Signor Pellegrini, a Roman antiquary, conveying a very full but somewhat dry report on the entire range of monuments upon that classic way between Rome and Albano. At the second, Mr. J. H. Parker delivered (for we should not say *read*, seeing that, but for the use of a few notes, all was extempore) a learned lecture "On Roman Aqueducts," referring to all the remains of those structures in the obscurer as well as the best-known examples, and illustrating his theme, as he went on, by a series of excellent drawings, plans, and photographs prepared by a French artist expressly for the occasion. Mr. Parker's support was never more ably given to the new association; and it struck us that, of all we have hitherto heard at its meetings, this lecture on aqueducts was the master-piece. Weather did not permit the resuming of the study under the same efficient guidance, on two successive days of peripatetic investigation, for which the lecturer had invited his hearers to accompany him, as well to the sites of all aqueduct ruins within the walls as to the more remarkable of such antiquities on the Campagna; which promising expeditions have not, however, been put off *sine die*.



CHURCH INSTITUTE, LEEDS.—MESSRS. ADAMS & KELLY, ARCHITECTS.

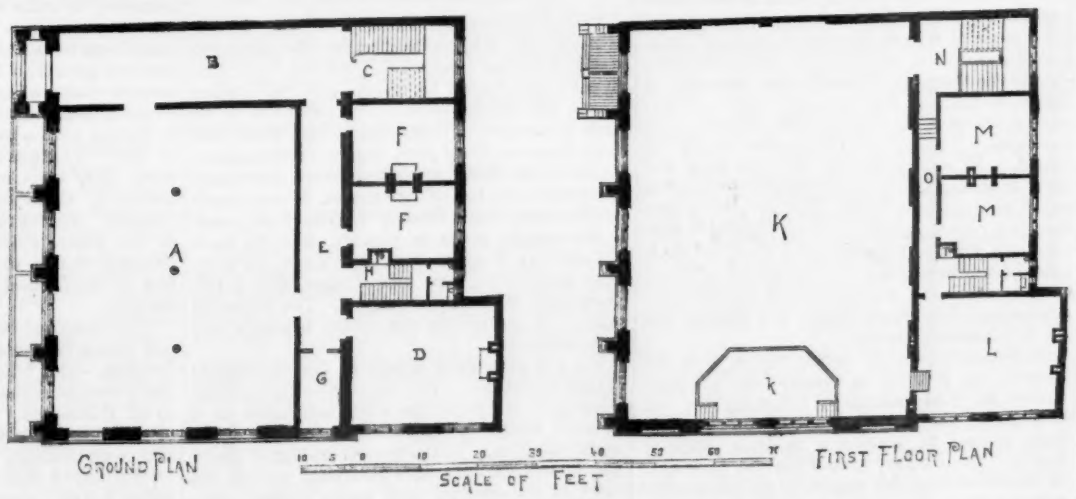
REFERENCE TO PLANS.

Ground Plan.

A. Reading-room and Library.
B. Entrance-hall.
C. Principal Staircase.
D. Clergy-room.
E. Corridor.
F F. Class-rooms.
G. Secretary's Room.
H. Back Staircase.

First-Floor Plan.

K. Lecture-hall.
k. Platform.
L. Council-room.
M M. Class-rooms.
N. Landing, Principal Stairs, and Entrance to Lecture-hall.
O. Passage.
P. Lift.



LEEDS CHURCH INSTITUTE.

THE foundation stone of this building was laid not long ago by the Archbishop of Canterbury. The design selected in public competition is by Messrs. Adams & Kelly, architects, of Leeds. It is in the Decorated style of architecture. The principal fronts face Albion-place and Land's-lane. That towards Albion-place is divided by buttresses into five bays, which are gabled and finished with stone coping and carved finials; at the spring of the coping are gurgoyles, carved with grotesques, and supported on coloured shafts. The traceried windows are of stone, and light the library and large lecture-hall. The bay next Messrs. Hebblethwaite's premises has a projecting gabled porch, over which are flying buttresses. The principal feature towards Land's-lane is the large gable, pierced with coupled three-light traceried windows, with circular one over. This window also lights the lecture-hall: on each side of it is an arcading, and beneath it traceried windows lighting library and reading-room, also secretary's-room. The clergy and council room have also windows in this front. The building is of brick, with stone dressings and coloured brick bands. The tympana and spandrels of arches are filled in with pattern brickwork.

The roofs are covered with slates, laid in bands of two colours, and surmounted with ornamental iron ridge cresting. In the centre of the lecture-hall roof rises a flèche, terminating with a metal cross and finial: this, together with the piercings in the end of the large gables, serves for ventilation. In the basement floor is the librarian's-room, with kitchen and pantry attached; coal-place, heating-chamber, large kitchen fitted up with boilers, &c., for institute purposes, and store-room. A lift is provided for the several floors above. The ground-floor has a spacious hall in direct communication with principal staircase, which is lighted by a stone traceried window; reading-room and library, with secretary's room. At the back of the library runs a corridor communicating with class-rooms, clergy-room, and back staircase. On the first floor is the large lecture-hall, 48 ft. span, and extending the whole of the frontage towards Albion-place. The roof of this room is formed of principals, with curved braces and hammer-beams, supported on moulded and carved corbel shafts. The ceiling is boarded, and divided into panels by chamfered ribs at the end. Next Land's-lane is a raised platform. At the back of this room runs a passage communicating with class-rooms and council-rooms. The second-floor is allotted to bed-rooms.

SANITARY MATTERS.

Chichester.—The report of Mr. Arnold Tayler, the inspector recently sent down to Chichester by the Home Office to report upon its sanitary state, has been presented to the Town Council. It represented the necessity of works for drainage and the supply of water, and directed that the town council should take immediate action in these respects. Upon this report being presented and considered, the town council, true to its opposition to all sanitary improvements in the city, expressed, through Mr. Councillor Adames, the opinion that Chichester did not suffer more from disease than other parts of the county which were drained; that if there were any powers under the Sanitary Act to compel them to adopt a most expensive system of drainage, it was a most despotic enactment, and more outrageous than any tyranny ever practised in Russia or Austria; and that, with such an enormous increase in the rates as that contemplated, hundreds of people in Chichester would be ruined. It was ultimately decided that the town clerk should acknowledge the receipt of the report to the Home Office, stating that it had been laid before a meeting of the Council, called expressly for the purpose; and that, in order that the report might be in the hands of every one interested, the council had ordered it to be printed and distributed among the council and the inhabitants generally.

Wolverhampton.—We deeply regret, says the *Birmingham Journal*, to observe that the town council of Wolverhampton, following the bad example of the town council of Birmingham, have refused to appoint a medical officer of health. The sanitary committee did *their* duty in recommending the appointment, but the corporation lamentably failed in *theirs* in upsetting the decision of the committee. The grounds on which the council arrived at its decision—if, indeed, the grounds stated were the real ones, which we much doubt—were that the sanitary inspectors were able to do all that was necessary up to a certain point, and that at that certain point they could call in a medical man to do all that was necessary. The fallacy of such reasoning is so obvious that one would scarcely expect a deliberative body of intelligent men to fall into it. It is like setting a builder to erect a house, and calling in an architect when the builder has got into such a mess that he can get no farther. When the advocates of bad smells and the owners of small house property are in the majority, it is in vain to urge sanitary reformation.

Liverpool.—There is a prospect of an early accomplishment of important sanitary reforms,—the substitution of water-closets for open middens, the closing of existing slaughter-houses, and the erection of abattoirs near the Stanley market. The town council has given its sanction to the clause in the Improvement Bill, which seeks power to close the slaughter-houses and to erect abattoirs, on the proposed site outside the town; and the health committee have passed a resolution in favour of application being made to Parliament to grant compulsory power for the conversion of privies into water-closets, a proportion of the cost to be borne by the Corporation. Both schemes, however, are threatened with opposition.

DRAINAGE OF BRUSSELS.

AT a recent meeting of the common council of Brussels, the mayor, M. Anspach, made an explanation with regard to the arching of the river Senne, which, as our readers are aware, has been undertaken by the Belgian Public Works Company (Limited). The question has been discussed for some years, and has been reported upon repeatedly by all sorts of commissions, committees, and boards. The citizens appear to be getting impatient, and the mayor explained at the meeting above referred to that the works were to have been commenced on the 22nd of January, but in consequence of the severity of the weather the company were not ready, and the opening has been postponed until the middle of February. The King is to perform the principal part of the ceremony, and it was felt that the opening should not be a merely formal one, but should mark the commencement of the work in good earnest. It will take four years to complete, and the purchases of the houses and compensations will be made in May; but, so far as the middle of the town is concerned, no notices to quit will be served this year at all events, as the operations in the outskirts will occupy some months. Part of the work has been sublet by the company to Messrs. Mantion, contractors, of Liége. M. Cogniou is to superintend the works on the part of the Government, and M. De Rote is to look after the interests of the town of Brussels. These appointments have not yet been confirmed by the Government, which delay has in some measure necessitated the postponement of the opening ceremony.

PRUSSIA.

NAVIGATION AND TELEGRAPHY.

AN influential committee is now being formed at Berlin, for establishing, under the patronage of the Prussian Government, an important line of packets between Germany and the United States, *viâ* Southampton. The service is to be made by packets of large dimensions, which will have, as an auxiliary port, that of Geestemunde, a Hanoverian port near Bremerhaven, now made Prussian by the recent annexation. It is to carry the European mails directly to New York; each of the vessels, seven in number, is to be built in France or England, and is to carry 100 first-class passengers, 100 second-class, 600 third-class, and 1,000 tons of freight. The project is said to be backed by the Count Bismark and other ministers.

We will give some details of the telegraphic system in Prussia. The department of national telegraphs is under the superintendence of a director, who is directly under the orders of the prime minister. In the central station at Berlin may be seen an apparatus connected with all the lines of the country, and many foreign ones. Among the objects of special interest, the magnetic accumulators, the permutator, which is the largest in the world, are the most remarkable; also there are worthy of interest the machine for daily meteorological despatches, and that by means of which the same correspondence can be transmitted simultaneously to all parts of the kingdom.

The lines, as well as the stations, are classed in such a manner, that the system of centralization in no way prevents direct communication between neighbouring places. The service is carried on by a special staff of telegraph clerks, except on the lines called *omnibus*, which are at the disposal of small towns and villages, and which are worked by the post-office *employés*. On these secondary lines the needle or some other simple machine is used instead of the Morse system applied to the great lines.

With a good organization, and by the adoption of the most simple mechanical combinations, the Prussian public, it is said, are served at a cheap rate and rapidly; moreover, the excess of the receipts over the expenditure has much encouraged the Government to lower the tariff. The lowest price is 8d., and the net profit for the last year has been 100,000*l*.

FROM MELBOURNE, AUSTRALIA.

THE Intercolonial Exhibition, preparatory to the Universal Exhibition of 1867 at Paris, has been opened with *éclat* by his excellency the Governor of Victoria, Sir J. H. T. Manners Sutton. The building is so arranged as to form hereafter a permanent addition to the public library. The first addition was found to be inadequate to the purposes of the Exhibition, and a new annexe had to be built. The whole space available for exhibitors throughout the Exhibition buildings, is 39,500 superficial feet. The chief feature is the central hall, designed by Messrs. Reed & Barnes, containing an area of 17,200 superficial feet.

"Its noble proportions [says the Melbourne *Age*] are seen to the greatest advantage from opposite the organ gallery. Looking down the avenues on the right and left, with their annexes, some conception may be formed of the number and great variety of the exhibits. Suspended from the arched roof are the banners and insignia of the municipalities throughout the colony, which, from their variety and rich decorations, add materially to the general effect. The visitor, if he pleases, may pass into the rotunda on the right of the grand hall; or enter the eastern annexe, devoted to the display of carriages and other vehicles manufactured in the colony. In the rotunda, the superficial area of which is 3,000 ft., the exhibits are of a very interesting character, consisting principally of articles of *vertu*, some of which are of great value. At the southern end of the grand hall, beneath the organ loft, access is obtained to the picture gallery, where the chief attraction will consist in the numerous photographic views of localities throughout the colony. A very large collection of water-colour drawings and oil-paintings, contributed by various individuals, will elicit the admiration of visitors. The department allotted to machinery is at the northern end of the grand hall. Steam power employed for the working of the machines is supplied by Messrs. Wilkie, Welch, & Co., the exhibits including several which show the manufacture of many familiar articles of ordinary use. The quadrangles north and south of the rotunda are embellished with fountains, and castings in bronze and plaster from the antique model. Extensive accommodation is provided beneath the grand hall for refreshments, access to which is obtained by steps leading from one of the quadrangles."

An excellent project is in hand for the improvement of the National Gallery in Melbourne. The Fine Arts Commissioners have resumed their labours, and taken practical steps towards procuring some additions to the gallery. On the death of Sir Charles Eastlake, it became necessary to make a new arrangement for this purpose; and it is understood that communications have been addressed to several of the most eminent artists in England, stating the circumstances under which the project of a Victorian National Gallery originated, and requesting each to furnish such a picture as he can for the sum of 300*l*. The gentlemen to whom these overtures have been made are said to be Messrs. Stanfield, Creswick, Leighton, Phillips, and Maclise. Should the overtures be responded to in the genial spirit which is anticipated, the National Gallery of Victoria will become another link of intellectual sympathy with the mother country.

The inaugural ceremony of the Victorian Deaf and Dumb Institution took place on the 13th of October. The building was formally opened by the governor. The building is situated adjacent to St. Kilda-road. It was stated that the cost of the present building, including the fencing and outbuildings, was 6,800*l*. Towards the liquidation of that amount, the Parliament had voted 4,000*l*.; and a sum of 1,800*l*. had been received from private subscriptions; leaving

1,000*l.* still to be provided. The building is surmounted by a lofty tower.

The congregation of the Independent Church, in Collins-street, are erecting a new place of worship. It is to be completed in nine months, at a cost of 12,000*l.*, and it is designed to accommodate 200 persons.

An attempt has been made to get up a demonstration of unemployed, for political purposes, it is said, but the attempt was a total failure. One of the deputation to the chief secretary, from a meeting of at the utmost 200 persons, was a working blacksmith, who confessed that he had thrown up his employment because his employer refused to give him more than 4*l.* 10*s.* a week. Other meetings were to be held, but the result was *nil.*

The Registrar-general's report on the vital statistics of Melbourne and the suburbs, for the month of August, is published in the *Government Gazette.* From it we learn that 218 persons died during the month. The deaths were fewer by 20 than the average of the month in seven years, and this notwithstanding the districts have greatly increased in population during the period. The deaths of males and females furnish a proportion relatively to the whole mortality of 57 per cent. and 43 per cent. respectively. Deaths of children under five exhibit a proportion of 44 per cent. to the whole, against 49 per cent. in August, 1865; 34 per cent. in August, 1864; and 49 per cent. in August, 1860. Forty-nine deaths, or 22 per cent. of the whole, took place in public institutions, viz.:—30 in the Melbourne Hospital, 1 in the Lying-in Hospital, 5 in the Benevolent Asylum, 2 in the Immigrant's Home, 3 in the Yarra Bend Lunatic Asylum, 4 in the Industrial Schools, 3 in the Melbourne Gaol, and 1 in the prison hulk *Success.*

The *Geelong Register* states that the Geelong Woollen Cloth Company's building, on the banks of the Barwon, is nearly completed. The building first erected is of bluestone, and the main room is 111 ft. in length. The new building now being erected will also contain a room 111 ft. long for the reception of looms, besides an engine-room, and the long room is 44 ft. wide. Between the two buildings there is an open space about the same width as the room, which it is intended to roof over and inclose at each end, so that there will eventually be a range of three large buildings all conjoined, forming an immense factory. The building now being completed is on a plan sent from England. The main room will be the same length as that in the old building, but will be 44 ft. wide in the clear.

THE SHORT-TIME MOVEMENT.

AN experiment has recently been tried at Mulhouse, by M. Jean Dolfus, so well known for his numerous philanthropic schemes, with very great success. It occurred to him that the working-day of twelve hours might be shortened by one hour without any decrease in the quantity of material produced, and that the loss of time would be compensated by the increased power of production in the workman. For the first few weeks the quantity fell off; but it increased gradually, and eventually from one to five per cent. more work was done in eleven hours than had formerly been done in twelve. There is also a large saving in the wear and tear of machinery, and the cost of warming and lighting the mills.

THE TRADES MOVEMENT.

Stockport.—The operative masons employed at the New Connexion Chapel, Wellington-road, struck work, on the ground that Mr. Peirce was measuring their work, a practice they would not permit. The masons at the St. Peter's Gate Bridge were all taken away. Mr. Peirce, not wishing the works to stand still, gave his word he would not repeat what was objected to. He was then required to pay them their wages for the time they had been stopped, and was informed he would not be allowed to go on until this was done. To this last demand Mr. Peirce objected. The men, apparently ashamed of their conduct, commenced work again, having lost their time. The matter is to be brought before the master masons and the General Builders' Association.

Nottingham.—At a meeting of the Nottingham Chamber of Commerce, Mr. A. J. Mundella referred to a paragraph in the annual report which had relation to arbitration, and remarked that there ought to be something done to allay the state of chronic warfare which now existed throughout England on the question of wages. In the hosiery trade they had found a board of arbitration work most satisfactorily. During the last two years the state of matters in the hosiery trade had been of a very anxious character, but they had been able to take their contracts without fear of strikes. In fact, they considered a strike an infraction of the rules. The Board consisted of seven workmen and seven employers, and they bound themselves to stand by the decision which should be arrived at, and they were able to settle their difficulties in the most amicable and satisfactory manner. They had found that, during the last six years, all the decisions of the board of arbitration had been agreed to. Mr. Hill said the workmen appreciated the board of arbitration, and considered it a great blessing to them.

Wolverhampton.—An address and a silver inkstand have been presented to Mr. Rupert Kettle for his able services in the cause of arbitration, by the master builders and operative carpenters and joiners in this town. Most of the architects and builders were present at the presentation, as well as many operatives.

THE LATE M. INGRES.

THE town of Liége possesses a very beautiful work by this artist, which was painted by him when a very young man. It is a portrait of Bonaparte as first consul. In 1804, just previously to the establishment of the Empire, the consular government decided that the portrait of the first consul should be sent to the principal cities of the Republic, and M. Ingres was the artist entrusted with the work. The original painting, of which several copies were made, was placed in the town-hall at Liége. In compliance with the wish of M. Ingres and the French government, it was sent to the Paris Exhibition of 1855, the municipal authorities having first stipulated that it should be insured for 20,000 francs, and conveyed to Paris under the personal supervision of a deputy to be appointed by the artist, and returned immediately the Exhibition was closed.

PICTURE FOR CHRIST CHURCH, MARYLEBONE.

WE have before now mentioned the large picture intended for the east end of Christ Church, Marylebone, on which Mr. W. Cave Thomas has been for some time at work. It is now completed, and will probably be placed in its intended position next week. In form it is a flattened arc of a circle: the subject is the diffusion of the gifts of the Spirit, as suggested by the text, "And when He had ascended on high, He sent them gifts." Christ, the central figure, seated, is despatching his angels loaded with good gifts. On the one side are sailing earthwards Power, Wealth, Beauty, and Plenty; and, on the other, Faith, Wisdom, Justice, and Honour. The figure of the Saviour is one of dignity and power, the drapery admirably painted: the heads of the various angels are expressive and beautiful. The result, as a whole, is more than admirable; and we congratulate alike Mr. Cave Thomas on his most successful completion of a not easy task, and the congregation of Christ Church on the possession of a fine work of art.

The background, according to a Russian method, is sanded and gilt, the nimbus of the Saviour being alone of flat gilding.

SCHOOLS OF ART.

The Cirencester School.—The distribution of prizes gained by students of this school in local and national competitions took place at the Corn Hall, Earl Bathurst in the chair. Numerous drawings by students of the school were hung upon the walls. The report states that the Cirencester School has successfully maintained the high position which it has achieved in previous years, and is now ranked amongst the best schools in England. At the last national competition Cirencester out-distanced some of the largest towns in the kingdom, carrying off, amongst other prizes, a national scholarship and three medals. This gratifying result is attributed to three causes—the industry of the students, the careful superintendence of the committee, with their secretary, Mr. Zachary, and above all, to the great experience, ability, and assiduity of the art-master, Mr. Miller. Having obtained one silver medal out of twenty, and two bronze medals out of fifty distributed among the 100 schools in the kingdom, besides other prizes, says the report, we congratulate the students on the fact of their success in the Third Grade Examination, having ranked us with the best schools, as we have been surpassed only by nine of the largest, including the Metropolitan. Mr. J. B. Atkinson, of London, afterwards addressed the meeting at some length on the subject of art.

SOCIETY OF FEMALE ARTISTS.

THE ladies make a better show this year in the gallery of the Architectural Union, Conduit-street, than they did last year. 396 works are exhibited (three being pieces of modelling), and include some very good pictures and drawings. Madlle. Rosa Bonheur sends a graceful drawing of "Doe and Fawns" (64); Madame Henriette Browne a good "Study of a Head" (54); and the Dowager Countess of Westmoreland, "Wellington writing his Despatch after Waterloo" (148). "The Conscript's Departure" (212), Miss E. Brownlow; "The Orphans" (215), Miss Kate Swift; "Persevere" (208), Miss G. Swift; Mrs. Lee Bridell's capital contributions; "Moved on," Miss F. Claxton; and Miss Jeykll's "Jehu" (235), are the best figure subjects. In works of another class, Madame Bodichon, Miss Williams (239), Miss Jane Deakin ("the Old Tower"), Miss S. S. Warren (77), the Misses Rayner, Miss E. Walter (127), Miss Florence Peel, Miss F. Minns ("May Blossoms"), Miss E. James (300), and Mrs. F. Marrable, who sends a number of vigorous sketches from nature, stand out prominently.

MONUMENTAL.

MR. NOBLE, the sculptor, is charged with the execution of the statue of Lord Palmerston, to be erected at Romsey; and the memorial window in the Abbey Church will be executed by Mr. Clayton.——Mr. George Wightwick, architect, has designed a public monument, which, according to the *Gloucester Chronicle*, it is proposed to erect on the Dewerstone, Dartmoor, to the late Mr. N. T. Carrington, "the poet of Devon" (father of the late Mr. F. G. Carrington, of the paper alluded to). The Dewerstone is a huge cliff, overhanging the valley of the Cad—one of the most charming scenes in south-west Devon. The design comprises a bust of the poet, placed on a pedestal resting on a platform approached by three steps, and surmounted by a canopy fixed on granite columns.——Preliminary steps have been taken for the erection of a public memorial of the late mayor of Margate, Mr. G. Y. Hunter, who died during his mayoralty.——The Emperor of Austria has given 40*l.* towards the erection of a monument, in the town of Arezzo, to the monk Guido, the inventor of the musical notes.

SOCIETY OF ENGINEERS.

ON Monday evening, being the opening of the session for the present year, the president Mr. N. H. Le Feuvre, delivered an inaugural address, in which he congratulated the members on the position the Society of Engineers had at length attained. It at present numbered amongst its members some of the foremost practical men of our time, and not in one branch of the profession alone. It might be said, indeed, that there does not exist a society with kindred objects possessing so many and varied elements of future success within it. Amongst its members and council were men of large experience in works of design, construction, and art; in boiler and marine engineering, electrical engineering, iron ship-building; gas, ordnance, railway, and hydraulic engineering; inventors, and designers of some of the most valuable processes of machinery employed in connexion with the arts and manufactures of our time. The Society also possessed the privilege of having upon its council the representatives of leading scientific journals.

In his address the president said,—

"I would desire to call your attention also to a circumstance which has lately begun to assume a serious importance to us as engineers, and which promises to endanger one of the most extensive of our manufactures, that is, the production and manufacture of iron. This has been carried on to such an extent now in Belgium, that after an interval of a very few years, the run of competition is altogether on the side of Belgian manufacture. They successfully compete with the most extensive of our iron-works in England. As examples, I would mention, that during the progress of the Exhibition lately erected in Amsterdam, it was found that while the earlier portions were being constructed, it was cheaper to import he ironwork from England; but before the works were completed, a considerable quantity of ironwork was supplied from Belgium and Holland, as it could be obtained at a lower price, and from that period to the present the competition has run hard between those countries and our own. In the new Pimlico Wheel Works, in London, which, as may be known, perhaps, to most of you, were constructed by our firm, we had also to give way to the importation of ironwork from Belgium; and it is the case also with regard to some works we are now carrying out in India, where the ironwork is actually shipped from Belgium to London, and re-shipped to Bombay, at a less cost than it could be purchased from English manufacturers. I cannot but view these circumstances with regret and apprehension; and I hope that, before such a state of things is permitted to become more serious, some co-operation may be induced amongst our leading manufacturers, so that this branch of our industry may not be altogether wrested from us. I mention these instances as facts which have come under my personal observation and experience. We find one of our leading railway companies (the Great Eastern Railway) being provided with locomotives from France, which resulted after a competitive tender, to which our leading firms were invited. The inroads of foreign competition have at length reached to such an extent, that one of our leading railway companies invited a French firm to compete with our manufacturers for the supply and erection of the ironwork of their terminal station in London. I cannot, therefore, but repeat that there are good grounds for the fears entertained with respect to this branch of our industry, and trust that these remarks may lead to some practical suggestions being made during the present session, with the view of ameliorating the present condition of our iron manufactures."

Speaking of the difficulty which the state of the roads had interposed on the occasion of the burning of Croydon Church, the speaker said,—

"Sanitary engineering has not yet sufficiently impressed itself upon our own profession, and I cannot but wish all our engineers would exercise their skill and influence in pointing out the necessity of devising the best scheme, irrespective of cost, for the drainage of our large towns and cities. The difficulty is an increasing one, and alarming to all thinking minds. The population of our large towns and cities increases daily. The sanitary measures which have already been carried out in some of our towns have had a most marked improvement in the health of those places; but they have, at the same time, materially deteriorated the watercourses of the country, many of which, after receiving the abominations attendant on sewage, are used as the only source of water-supply to large populations. From a paper read before this society in session 1865, we were informed that a quarter of a million of money has been made out of a portion of the sewage of Edinburgh, and that every acre of land under its influence produces ten times the amount of the average of agricultural land in the country. The question of the drainage of our large towns will come under the consideration of Parliament during the ensuing session, as the conservators of the river Thames have introduced a bill with a view to prevent all sewage matter flowing into the Thames; and if this measure becomes law, it will be a precedent which will affect all the rivers and streams in this country, and no doubt it would be far preferable that Parliament should interfere, and legislate on this important subject.

The character of prevailing architecture cannot fail to be of interest to a society like ours. We have still to regret the absence of anything like conformity in the several practices of architects and engineers, and no doubt the character of our nation, judged by its architecture alone, would not stand very high. We have, of course, no modern undertaking which for style could be compared with Westminster Abbey or St. Paul's. The more we go back into the architecture of our country, the more grand and refined it seems to stand out. We have at length reached no style or character of architecture at all. I consider this to arise in a great measure from the attempted estrangement between professions which are analogous, and the failure of modern architects to accommodate their designs to the progress of engineering science. A system is now being extensively adopted with regard to modern buildings which may be called, more or less, a system of iron architecture. The immense gain in strength and durability, in building where this material is employed, is undeniable. Architecture is the science of building, and therefore the engineer, to an iron bridge or other structure in which iron is employed, is as much an architect as the designers of Gothic structures with stone roofs, flying buttresses, and pinnacles. Considering the Church of St. Peter, at Rome, and the Cathedral of St. Paul, and other so-called architectural works, from a constructive point of view, it will be found that what is now called civil engineering was exercised by the architects of these structures in a very great degree. They built with the materials convenient to be used, according to the locality of the structures, and their works have remained commanding and imperishable. Until it is conceded that there can be but one science of building, we cannot look forward to any works likely to deserve our own admiration or the admiration of others."

As to the streets:—

"Our metropolis, containing a population of 3,000,000, has been for nearly a week in a helpless state of inactivity in consequence of the inefficient means we have at our disposal for clearing away the snow, and the utter want of system and care in the paving, lighting, cleansing, and traffic arrangement, is well worthy the attention of our profession. The snow might be removed at night by means of snow ploughs, and rapidly melted by heat at convenient places. The relaying of our pavements and streets might be effected by improved machinery, and a diminution of time and inconvenience would thereby ensue. The introduction of subways, as suggested by the Metropolitan Board of Works, would tend to prevent the incessant breaking up of our main street. The lighting of our public thoroughfares is a disgrace to this city; the design of our lamp-posts and lamps is neither novel nor elegant; our finest streets are in comparative darkness as soon as the shops are closed. The cleansing of our streets is effected by means of manual labour at the most inconvenient hours of the day; the watering-carts lay the dust, and, raising mud ankle deep, destroy the macadam, create dirt, bespatter our persons and carriages. The encounter of the mud-cart and its two or three attendants completes the delights of a summer-day's walk, ride, or drive in town.

The traffic arrangements in our streets in the metropolis must shortly receive attention, as we are informed from statistics obtained that more accidents and loss of life take place in the streets in our metropolis, than on the whole of our railway system in the United Kingdom. How is this occasioned? we may naturally inquire. The immensity of the traffic might be relieved by employing the present area of our streets in a twofold manner, viz., by constructing subways for traffic under or viaducts above our existing streets."

DESTRUCTION OF THE NAMUR THEATRE.

THE theatre at Namur was totally destroyed by fire on the 14th inst. The representation of *Faust* had finished at a quarter-past eleven, and the fire was discovered at one o'clock next morning. The entire building was one mass of flame in a short time afterwards, and at two o'clock the roof fell in. Fortunately no lives were lost, and the library and part of the wardrobe were saved. The cause of the fire is said to have been an over-heated flue. The Namur theatre has been singularly unfortunate, no less than three fires having taken place within six years. The old building was destroyed on the 17th of November, 1860; it was rebuilt, and again burnt down on the 25th of September, 1862. Another building was erected from the plans of M. Fumière, and opened in October, 1863, but only to share the fate of its predecessors. The building was insured for 350,000 francs.

A BRIDGE ON BONES.

MR. C. A. ELLIOTT and Mr. Bryant, engineer, engaged on the new Blackfriars Bridge, brought before the British Archæological Association on Wednesday evening last the curious fact that, after they had got up the foundation of the second arch, on the Middlesex side of the river, as they were dredging up the ground from under the foundations, they dredged up a quantity of bones, fully 15 ft. below the bed of the river, and below the masonry for the whole foundation, which did not go down to the clay. In the gravel and near the clay they got up a large number of bones of the ox, the sheep, the horse, and a few human bones. It appears that the foundation of the old bridge was upon these bones. The bones were darkened, but in a high state of preservation.

THE LATEST ABOUT SIR JOHN SOANE.

THE last "wills and testaments" of English architects are very little known—and yet our architects, from Bishop William, of Wykeham, to Sir Charles Barry, have died—sworn under a good figure, and with characteristic clauses, bequests, and conditions, in their wills. The writer who signs this communication was the first to turn attention to, and the first to print, the will of Inigo Jones. It is his purpose, from time to time, to print in the *Builder* extracts from the wills of English architects, or matter of interest connected with them.

The great Will benefactor among architects to Great Britain was Sir John Soane. The general tenor of his will is known beyond the regions of law and lawyers. What I have now to tell about is new and of moment.

On the 22nd of November of the year just past, the trustees of the Soane Museum in London had (as by will directed) to open, and exhibit, certain locked and sealed repositories in the hidden and secure cellars of the Museum. This direction was duly performed, and in great state, and what was opened was found to contain some pounds' weight of slips of *blank* paper, cuttings from books and magazines—the *Gentleman's* and the *Ladies'*,—a mass of old newspapers, a parcel of old circulars, sundry small and useless things, like old visiting-cards (not so good as the lot Miss Banks, Sir Joseph's sister, bequeathed to the Print-room of the British Museum); letters (hundreds in number) addressed to him between 1780 and the last days of his vanity. All were in a mass without classification. Many, however, were endorsed, but few have proved of interest. *Begging* and asking letters predominate,—some from John Taylor, of the *Sun* newspaper; others from James Perry, of the *Morning Chronicle*, and from B. R. Haydon. There are not a few letters, too, from John Britton and Mrs. Hofland. A passage of letters between Sir John Copley (Lord Lyndhurst) touching a debt due to Soane from John Singleton Copley, R.A., the Lord Chancellor's father, will be read with interest.

We were attracted additionally by one paper—an inquiry from a man in authority relative to the charge per lamp for illuminating the Bank of England, for the rejoicings of the peace of 1814. A tender was made to the Bank architect,—10d. a lamp if for one night; 7d. a lamp for two or three nights.

Lord Stanhope, the learned biographer of William Pitt, will be pleased to learn that England's great prime minister, Fox's formidable rival,—dabbled in architectural elevations (his father, the great Lord Chatham, was fond of landscape gardening), and that among "Soane's Papers" (just opened) is a brief note from the minister, and an outline pencil plan of a house, endorsed by Soane as drawn by William Pitt.

The present curator of the Soane Museum is performing his work well.

PETER CUNNINGHAM.

SLIPPERY PAVEMENTS.

I TAKE the liberty of calling public attention, through the medium of your columns, to the incompleteness of the police request, that every one shall keep his own door clean after a snowfall, for we may observe that pedestrians choose to walk in the road on such mornings as we have had lately, as the scraped pavement is far more slippery than where the snow is allowed to lie; and I would suggest that an addition be made to the request now in use, desiring householders to plentifully bestrew the footpath before their houses with ashes. Sand is thrown into the roads, and is of great utility; ashes cost less, and will serve the purpose equally well. Many folks already do this, and, after slipping about elsewhere, it is quite pleasant to feel something underfoot that will not horizontalize you; and, although as a rule, it is not a pleasing sensation to scrunch ashes, the process is preferable to a broken limb obtained on a "clean" pavement.

J. G.

MUSICAL CHIMES AND CARILLONS.

MOST persons who have listened to the delightful music of the *carillons*, in Belgium, or certain other parts of the Continent, must, I think, regret that we have so very few sets of chimes in England that can play even a plain and easy melody in a satisfactory manner. By the word "chimes," as here used, I mean a set of eight, ten, or twelve bells—of which we possess many fine examples in our church towers—"tuned to the modern musical scale, and struck by hammers acted on by a pinned cylinder or barrel, which revolves by means of clockwork." Sacred or secular melodies are thus performed at certain intervals. "I never hear chimes," says Robert Southey, "that they do not remind me of those which were formerly the first sounds I heard in the morning, which used to quicken my step on my way to school, and which announced my release from it, when the same tune methought had always a merrier import. When I remember their tones, life seems to me like a dream, and a train of recollection arises, which, if it were allowed to have its course, would end in tears."

Now, the mechanical chimes at present existing in this country, with here and there an exception, have clumsy wooden barrels, the pins of which are fixtures: so that if tunes as inappropriate and detestable as "Drink to me only," and certain others of a similar class, have been set upon a barrel, one or other of such tunes must be played so long as the same barrel is used. A far better apparatus has, however, been made, the most prominent feature of which I will now endeavour to point out. Instead of a wooden barrel, a hollow metallic cylinder is introduced, which is so constructed that any tune or tunes of suitable length, the notes of

which correspond with the several sounds of the bells, can easily be set upon it by any intelligent musician. And as the pins of the cylinder are movable, by merely turning the nuts of the screws, new tunes can be substituted for the old ones on the same cylinder as often as you please.

These few hints are therefore offered in the hope that they may lead some of our influential countrymen to take up the subject.

With regard to *carillons*, or Continental chimes, I may observe that, in several instances, these have from 40 to 48 bells, which are tuned to the chromatic scale, and worked by a pinned cylinder of enormous dimensions; so that a machine of such a magnitude is capable of performing appropriate selections of music, certain passages being harmonized in three or four parts.

Many towers also contain an instrument known as *le carillon à clavier*, having a set of keys and pedals—the former for the hands, the latter for the feet,—communicating with the bells as those of the pianoforte and organ do with strings and pipes. "These keys are projecting sticks, wide enough asunder to be struck by the hand sideways, without hitting the neighbouring keys." In some places an organist performs on this instrument two or three times a week.

I may take this opportunity of stating that *carillon* is likewise the name of a small keyed instrument, now but little known, to imitate a peal of hand-bells, the tones being produced by box hammers striking metallic bars of different lengths. Handel, it is said, used to accompany his air in Milton's Allegro, "Or let the merry bells ring round," on this instrument; and in Saul, the chorus, "Welcome, welcome, mighty king."

In conclusion, permit me to add that it appears to be very desirable to have superior machinery constructed to play at certain intervals of time upon the ordinary peals of bells at many of our English churches; and, in some particular instances, if a very few new bells were added to the peal, so much the better. But, having surveyed the bells in the tower of Antwerp Cathedral, as well as those at the Hall of Bruges, and often listened to their music, I would say,—Do not for a moment think of introducing a set of chimes on the Continental scale unless you are in a position to order a set of bells, the largest of which shall be considerably heavier than is the tenor of any peal in Great Britain. I venture to throw out this hint, because it was proposed some time ago to place in the beautiful tower of one of our country churches a set of chimes, "equal in extent to those of the Belgian towns," by adding thirty-six *smaller* bells to the present peal of eight. And I happen to know that the weight of the tenor, or largest bell of this peal is only 22 cwt. It may, therefore, be safely asserted that it would be well to place within the lofty tower a set of excellent chimes, on a moderate scale; and, for this purpose, seven bells added to the present peal would be amply sufficient; but, to carry out such a scheme as the above-mentioned, would be as great a mistake as that of substituting in a very large concert-hall a small pianoforte for a "Broadwood's grand." THOMAS WALESBY.

EXHIBITION OF DESIGNS.

SIR,—With much pleasure I read in your journal some mention of the desirability of prolonging the exhibition of the Designs for the National Gallery until the time when those of the "Law Courts" will be on view. If, through the medium of your paper, you would endeavour to influence the minds of those *in power* to accomplish such an end,—or, at any rate, to have the former on view for, say a fortnight, during the term allotted to the exhibition of the latter,—I believe you would be the means of conferring a great convenience on country architects.

ONE OF THE NUMBER.

CEILINGS IN IRON HOUSES.

AMONG the Peninsular and Oriental Company's buildings at Bombay, is one of which the top story is roofed with corrugated iron, but in the roof two skins of iron are made use of, about a foot apart, and free access is left for the external air to the cavity between them, and good ventilation is given to the room itself at the ridge.

I have been in this room in the hottest part of the day, and its temperature was then not more than two or three degrees higher than that of the two lower floors. I considered it certain, though I did not test the fact experimentally, that there must be a current of air constantly circulating in this space between the two coverings. Even if, however, there was no current, the layer of air would serve the purpose of a non-conductor of heat excellently well, just as it does when double windows are used.

Probably, therefore, your correspondent "G. P." will diminish or cure the evil he complains of by putting on a second skin of corrugated iron, a foot or more above the present one, and leaving the space between as uninterruptedly open as possible, with free ingress and egress for the external air. He had better, also, paint it white outside, a well-known precaution. T. R. S.

IN reply to your correspondent from the Cape of Good Hope, I think the best and cheapest non-conductor of heat for his ceiling, will be some good thick brown paper, well stretched, and tacked on some slight woodwork, about 6 in. from the iron. The cost of brown paper will be from 24s. to 30s. per cwt. 1 cwt. will cover about 60 ft. square. F. F. D.

IN answer to the inquiry from your correspondent, as to the best means for cooling the rooms of his iron houses, and as cheapness seems the object, the following he will find to answer his purpose:—Have a number of holes made as near as possible below the spring of the roof, the size of an ordinary air-brick, at 4-ft. or 5-ft. intervals; then place light timber midway between the holes, size about 7 in. by 1½ in., and fix a zinc or iron pot as near the roof as possible, with bell mouth. Place a common 3-in. pipe to the outside of the building, between the timber, to the middle of the room, then canvas and paper the upper sides of the joist, bringing the ends down where the holes are to the middle of the same. By this means the hot air that is generated will be expelled through the shaft; then, by finishing the under sides of the joist with canvas and paper, and perforating holes in different places, and making a hole in the centre to pipe, will form as cool a room as any European room in summer-time.

M. B. (Mechanic).

IN reference to the question as to "ceilings in iron houses," I beg to remark that felt is a non-conductor of heat: so, at least, it is generally admitted. The question is, therefore, how to apply it. I would suggest that a ceiling should be formed of felt, stretched or supported by a metallic wire-rope from wall to wall. This mode of construction dispenses with timber, &c.

H. WALTER.

COTTAGE ARCHITECTURAL MUSEUM.

SIR,—In reply to your remark in last week's *Builder*, I beg to say that there has been no real delay on the part of this society. The matter has been under the anxious deliberation of the council ever since they provisionally awarded the prizes. Every effort has been made to obtain a suitable site on which the buildings are to be erected. The prizes cannot actually be given till the contracts are made, as the essence of the whole competition is, that the cottages should be erected complete for the one hundred guineas. And I now hope we are in a fair way of obtaining the land. H. MARTIN, Secretary.

HIGH-PRESSURE BOILERS FOR BATHS.

SIR,—In a new house, in course of erection, I have attached to my kitchen stove a small high-pressure wrought-iron boiler, for supplying a bath on the story above, and reading the account of the disastrous explosion at Mayor Constable's, near Hull, I begin to feel anxious lest the pipes (1 in. diameter), should ever get frozen, and then consequently (there being no valve, or any way of escape), the boiler would burst. I have spoken to the ironmonger who is doing the work, and he assures me such a thing is not likely to happen once in ten years. I tell him it might be just once in ten years too often, and that nothing will satisfy me but having some valve or other mode of outlet when the pipes are frozen, and the water thus hermetically sealed. He tells me that valves nearly always leak, and are very troublesome. Can none of your readers help me out of my difficulty? I would rather dispense with my bath altogether than run such a risk as I shall do without some outlet, in case of stoppage of pipes from any cause whatever. BETA.

DAMAGE BY FALL OF CHIMNEYS.

IN the Bail Court, at Nisi Prius, before Mr. Justice Shee and a Common Jury, the case "Kingsford *v.* Wells" has been decided.

The plaintiff was a dentist carrying on business at 54, Piccadilly, and the defendant was a jeweller at 55, Piccadilly, and the action was brought to recover damages against the defendant for negligence, in not having properly repaired his stack of chimneys, so that on November 22, 1865, the chimneys fell through the roof of the plaintiff's house and greatly damaged it.

The defence was that the plaintiff's roof was not in a proper state of repair. The defendant, upon taking possession of the premises, in 1859, gave a builder instructions to go over the premises, and put everything in a proper state of repair, and such repairs were done. The weather in October and November, 1865, was extremely boisterous and stormy—a sort of "whirlpooly" wind. On the 22nd of November, 1865, the stack of chimneys, which was built about fifteen years ago, was blown down.

One of the assistants of the meteorological department in the Board of Trade stated, that he was in London on the 22nd of November, 1865. The state of the weather on that day was blowing a strong gale at eight in the morning, and a more than ordinary strong gale at half-past nine. The scale went from 0 to 12. On that day the force of the wind was 11. The accounts were published every morning in the *Times*. If the wind blew with a force of 12 no ship could carry any sail. Such a force of wind had not been registered for several years.

The jury found for the plaintiff, but thought the defendant was not aware of the dilapidated state of the chimney.

REMOVAL OF SNOW.

SIR,—On the Saturday following the recent snow-storm, I employed a number of the road-men in collecting the snow in trucks from the narrow and important thoroughfares, and had it shot down the side entrances into the sewers, where it passed away with the stream as fast as the workmen shovelled it in. I am so satisfied with that experiment, that should another fall of snow occur, carts will be employed in lieu of trucks, and by that means a considerable extent of ground will be soon cleared. The warmer temperature of the sewer air and water quickly reduces the snow to water. JAMES LOVEGROVE.

Hackney Board of Works.

CHURCH-BUILDING NEWS.

Fulford, York.—A new church at Fulford, near York, which has been erected at the cost of nearly 5,000*l.*, and designed by Mr. J. P. Pritchett, architect, Darlington, has been consecrated and opened by the Archbishop of York. The style of the church is the Early Decorated, and at the south-west corner is placed a tower and spire 140 ft. high. The name of the church is St. Oswald's, and the contractor for the works was Mr. Weatherley, of York. The pulpit and reading-desk were executed by Messrs. Forsyth & Co., of London; the altar-rails were supplied by Messrs. Skidmore & Co., of Coventry; and the carving was done by Messrs. Burstall & Taylor, of Leeds.

East Rainton (near Durham).—S. Cuthbert's Church, East Rainton, has been consecrated. The church consists of nave, chancel, south porch, and vestry, and affords accommodation for 150 people. It is built in the Early Decorated style. A simple bell-cot over the west end contains a bell. There are two stained-glass windows, by Mr. Wailes, one in the chancel of the "Good Shepherd," and one in the nave representing S. Cuthbert. The church has been built from the design of Mr. C. H. Fowler, architect; Mr. Gradon, of Durham, being the general contractor; and Mr. Thornton doing the masonwork.

Wigan.—The church of St. James the Great, Haydock, has been consecrated. The church, which stands to the east of the highway leading from Haydock to St. Helen's, is built mostly of brick, and it adjoins a new schoolroom which has been added to the old building, while in the interior there are large doors opening into both these rooms, so that the space for those who wish to worship may be increased considerably beyond the west wall of the church proper. The style is Gothic; and, owing to the material employed, nearly the simplest form of Gothic has been chosen by the architects, Messrs. W. & J. Hay, of Liverpool, and carried out by the builder, Mr. George Harris, of St. Helen's. The church consists of a nave and chancel, with a porch and vestry. The porch is at the south-west, and some few of the dressings here are of stone; the nave is about 40 ft. by 20 ft., and 35 ft. high to the apex of the roof. It is lighted with nine single light lancet windows with stone sills, and filled with cathedral glass, surrounded by a border of stained glass. The roof is open to the summit, and all its timbers are stained and varnished. The sittings, which will accommodate 160 persons, are of pitch pine, stained and varnished; and the pulpit, reading-desk, lectern, and faldstool, which stands at the chancel entrance, are of the same material. There are also seats in the chancel for the choristers. The chancel arch is, like all the other arches in the church, of coloured brick, and in addition it rests upon carved stone corbels. The chancel itself is 16 ft. square, and the floor gradually rises by six steps to the altar. It is lighted by a three-light window filled with glass of the same character as in the nave, and by a couple of smaller windows to the south; on the opposite side being the vestry. Staffordshire red and blue tiles form the floor of the church. The interior of the walls are not covered with plaster, and the effect of the red bricks, relieved with the darker shades round the arches, is not altogether a disagreeable one. The whole of the seats are free and unappropriated. The cost of the building is between 1,300*l.* and 1,400*l.*

Stockbridge.—The Bishop of Winchester has consecrated a new parish church at Stockbridge,

where the old parish church had become so decayed and dilapidated as to be wholly unfit for Divine service. The new building has been erected by Messrs. Paul & Sons, of Southampton, from designs furnished by Mr. J. Colson, of Winchester, architect; the total estimated cost of the structure being 2,800*l*. The east window, of stained glass and three lights, was a gift from Mr. John Day, of racing celebrity, and cost 100 guineas.

Cheltenham.—St. Mark's Church, which was opened for divine service five years ago, has now been completed by the addition of a tower and spire, and it was opened by the Lord Bishop of the diocese, on Thursday in last week. The additions were part of the original design of the architect, Mr. Middleton; they were not carried out when the church was built on account of the want of funds. The site is high, and the spire is a conspicuous object in the town landscape; it is at the west end of the nave, with which it is connected by a lofty arch, with clustered columns. The lower part is intended for the Sunday school children; a gallery above serves for the choir. The west door and the window above are good specimens of the general style of the church. The former has blue Forest stone mixed with white in its arch, and red Forest stone jambs with foliated caps. The tracery of the west window is boldly marked and richly cusped; the upper stage of the tower is lighted by four two-light windows, with deeply-recessed jambs and arches, with red Forest shafts. The tower has a cornice and four pinnacles, hexagonal in plan. The spire is plain and severe in outline, being simply pierced with alternate rows of trefoils. The works have been carried out by Messrs. Wingate, of Gloucester.

DISSENTING CHURCH-BUILDING NEWS.

Scarborough.—The chief stone of a Baptist new chapel has been laid at Westborough. Messrs. Lockwood & Mawson, of London and Bradford (the architects of the South Cliff Congregational Church), are the architects. The chapel will form the central and prominent feature of Albemarle-crescent, in the middle of which it will be erected. The style of the building is Geometric, and the principal front will be built of Bradford rag wall stone, and with dressings of Whitby ashlar. At the south-west angle, a tower 12 ft. square, and surmounted by a spire rising to a height of upwards of 100 ft., will be erected. Internally, the church will consist of a nave and side aisles, divided by cast-iron columns, with foliated capitals, and supporting spandrel arches and an open timber roof; also, of transepts, baptistery, and organ chapel; and minister's and ladies' vestries. A small gallery is placed across the end of the chapel, over the vestibule, and which may at any future time be carried round the whole of the interior. The seats will be of open timber work, and, with the other internal woodwork, will be carved and varnished. The accommodation will be at present for about 850 adults; and the cost, exclusive of ground, about 4,500*l*. The works are being carried out by Mr. John Barry, jun., of Scarborough.

Bishop Stortford.—The new Wesleyan Chapel has been opened. It has been raised on the site of the fire in South-street, by members of the Wesleyan denomination. The building has been erected by Mr. Todd, of Cambridge; the architect being Mr. J. Cowell, of London. The Gothic style of architecture has been adopted. The interior will accommodate 220 persons. The vestries in the rear extend the width of the chapel, and will afford accommodation for the Sunday schools.

Tarporley.—The Wesleyans are about to erect a place of worship in Tarporley. Plans have been advertised for, and a competition amongst the Chester architects took place, the design sent in by Mr. Krolow being accepted. The plan of the chapel is a rectangle, 62 ft. long by about 39 ft. wide. The total length, including the singing gallery, will be about 79 ft. The design is in the Gothic style. The principal front consists of a central gable containing a five-light window; beneath this there are four small windows separated from each other by a dwarf column with cap and base. The height of the tower will be about 76 ft. The chapel is seated with open pews, and accommodates about 300 persons. The main timbers of the roof are visible, but the upper part of the roof is ceiled considerably below the ridge level, to assist the acoustics of the building. The whole of the woodwork and fittings are to be stained and varnished. The stone used in the erection is a self-faced even-bedded local stone.

Chester.—A new Welsh Calvinistic Methodist Chapel has been built in St. John-street, Chester, and opened for divine service. Attached to the chapel is a school-room, the whole structure involving an outlay of upwards of 5,000*l*. The design of the chapel is in the Early Pointed style, the French school being followed in the general details. The principal front to St. John-street consists of a gable about 65 ft. high, terminated by a foliated finial somewhat resembling a Prince of Wales' s feathers. The two entrances in this front are protected by a large open porch, consisting of five pointed arches, supported on stone piers, and polished red granite columns, having carved capitals and bases. Over the porch is placed a rose window. The window is 22 ft. in diameter. The chapel is seated for about 650 persons, principally on the ground floor, there only being a small gallery at the west end. The interior is lighted by day with large windows filled with ornamental glass, and by night with a series of large wall gas brackets, in wrought iron. The school-room, situated in the rear of the chapel and vestries, is a room about 60 ft. in length. The architects were Messrs. W. & G. Audsley, of Liverpool; the builder being Mr. Thomas Hughes, of Aldford. The carving was by Mr. Stirling, of Liverpool; and the whole of the ornamental iron work, by Messrs. Charles Smith & Sons, of Birmingham.

Books Received.

The Water Question: a Letter addressed (by permission) to the Earl of Derby. By J. BAILEY DENTON. London: Stanford.

IN this pamphlet Mr. Denton proposes to supply the metropolis from the higher sources of the Thames, in conjunction with the storage of surplus water, in preference to the more costly schemes of late proposed. The cost of Mr. Denton's plan he estimates at 4,500,000*l*. He stipulates for the purification of the sources of supply, where requisite, by the removal of all sewage water, "purified" or not purified, from the streams used; but thinks that such water might be allowed to be taken to the sea through the Thames below such water-supply sources as are requisite. He gives evidence that no purification can render sewage water, however much diluted, fit for domestic purposes. For the water withdrawn from the streams he proposes to compensate mill-owners and others by means of surplus reservoirs for flood waters. The head of his proposed works would be the fork formed by the Thames and Severn Canal, extending from its summit at Thames Head to its junction with the Thames at Lechdale, and the North Wilts Canal, which it was proposed to convert into a railway, not being profitable as a canal, and therefore to be had at a moderate price. The supply would be given to the present companies, and would not, without lifting, provide a constant supply at high pressure, as the grander schemes would do. Mr. Denton, however, regards the expense of re-arranging the whole system of service-piping as a set-off against the cost of lifting the supply to existing reservoirs.

VARIORUM.

"BARONIES of Forth and Bargey, County Wexford, Ireland: an Inquiry into the Origin and Philological Relations of the Antique Dialect formerly spoken in this District." By J. A. Picton, F.S.A. Liverpool: Printed, for private circulation only, by D. Marples. This paper was read before the Literary and Philosophical Society of Liverpool. It gives a learned and interesting account of a dialect based upon Old English, Danish, and other ancient sources, but now obsolete. The district where it was spoken is an almost insulated corner of Ireland, jutting out south-eastward towards England, whence it was finally settled by emigration of the Anglo-Normans, who, in 1169, landed under Strongbow and his companions, and took possession. The two baronies were then created; Forth being bestowed upon Robert Fitzstephen and Bargie upon Hugh de Montmorency. The dialect presents sufficient internal evidence that the population was largely recruited from Devonshire and the western coasts of England. Vallancey, the Irish archæologist, of whom Mr. Picton speaks respectfully, seems to have first drawn the attention of philologists to this district in the "Transactions of the Royal Irish Academy for 1788." The two examples of the dialect given from Vallancey and Mr. Hore, of Wexford,—the only two in existence,—are thoroughly analyzed by Mr. Picton, and are very curious.——"Companion to the Weather Glass for 1867." By the Rev. R. Tyas, M.A., F.M.S. London: Bemrose, Paternoster-row. This seems a very useful annual to all interested in the weather,—and who are not? It contains a calendar for the present year, with a column in which to note down the weather as it occurs. It also treats fully of the barometer, the rain-gauge, and the thermometer, as well as of clouds, winds, &c.; and is illustrated by engravings. ——"The Garden Oracle for 1867" contains a new selection of the best varieties of garden fruits, descriptions of new plants, new flowers, and new fruits. Also selections in all the classes of show and decorative plants, in which are enumerated the best roses, dahlias, hollyhocks, gladioli, and pansies.

Miscellanea.

THE CONTRACT FOR WORKS AT CHATHAM DOCKYARD.—The contract has been signed at the Admiralty for the construction of the basins, docks, factories, and other works connected with the intended enlargement of Chatham dockyard. The estimated outlay is a million and a quarter sterling. Although several of the most eminent of the railway, engineering, and other firms in England were invited to give in tenders for the execution of the works, they either shrank from the undertaking, or tendered on terms which the Admiralty deemed to be inadmissible, and the contract has accordingly passed into the hands of Mr. Gabrielli, the head of an Italian house. Mr. Gabrielli, we believe, executed the enlargement of the naval establishments at the Royal Dockyard, Malta. The works will be commenced in a few weeks, when 2,000 hands will be taken on in the first instance for the preliminary excavating operations.

THE LAW OF CONTRACT BETWEEN MASTER AND SERVANT.—A meeting of the subscribers and friends of the Law Amendment Committee of the Social Science Association has been held, to hear a paper "On the Law as regards Contracts of Service between Masters and Servants," read by Mr. Edgar. Mr. Clarke occupied the chair. Mr. Edgar stated succinctly the existing law upon the subject; considered the grounds upon which it is supported, and the objections to which it appears to be liable; and made some remarks upon the resolutions agreed to by the select committee of the House of Commons. He was persuaded, he said, that any legislation founded on the report of the committee would go but a short way towards putting an end to the dissatisfaction and discontent which undoubtedly existed on this subject, and which he believed would continue to exist until the same measure of justice was meted out to the working man as to the rest of the community.

DECORATION OF HORSHAM CHURCH.—The church of St. Mark's, Horsham, has been decorated in an inexpensive manner by Harland & Fisher, of London. The arrangement is as follows:—A broad band with a text is carried beneath the wall-plate. The text on the north side is, "Surely the Lord is in this place: this is none other but the House of God, and this is the Gate of Heaven!" That on the south side is, "I have hallowed this house, to put my Name there for ever, and mine eyes and my heart shall be there perpetually." The outline of the arches has a pattern of crocketing in red, carried round, bordered with a line of grey. On the splay there is a flowing pattern in grey, while on the soffits is painted a broad red band. From the floor to the springing of the arches is filled with a pattern of masonry. The stone corbels which carry the roof are picked out with grey and gold. The chancel arch and east end are treated more ornamentally, a text, "Holy, Holy, Holy, Lord God Almighty," being painted round the curve of the arch; a row of crocketing beyond that; while a painting of the "Agnus Dei," and "The Pelican and her young," are introduced at the springing of the arch, the intervening spaces being filled with geometric diaper work. The chancel itself was decorated by the same artists a few years back.

THE LICENSING SYSTEM.—Many persons being desirous of seeing some change for the better made in the present system of licensing public-houses and beershops, especially in reference to that clause in the Beershop Act which allows of drinking on the premises, it is proposed to hold a conference on the subject in Exeter Hall on the 29th and 30th of January. The Earl of Shaftesbury will preside.

NEW CEMETERY FOR BELFAST.—The committee appointed by the town council for the purpose of investigating the various plans for the new cemetery, on the Falls-road, have, we understand, selected the design of Mr. Gay, of Bradford. The area of the cemetery is forty-five acres within the walls, and the laying out of the ground, planting, draining, and boundary-walls is estimated to cost about 10,000*l*.

MUSEUM FOR THE EAST OF LONDON.—The iron buildings at South Kensington, which years ago and when the design was only on paper we christened the Brompton Boilers in the endeavour to obtain an improvement in their appearance (a name that has stuck), are to go to a piece of land in Bethnal Green. The Treasury has sanctioned the expenditure of a considerable sum of money to form a museum there for the eastern half of the metropolis.

LAND IN LONDON.—At the last meeting of the Union Bank, Mr. P. N. Laurie, chairman, said, the Corporation, having determined to widen Mansion House-street from the bottom of the Poultry, have taken possession of the frontage of the buildings which the Union Bank were about to erect at that spot. For this little strip of ground, measuring, according to Mr. Laurie's statement, 15 ft., the Corporation have had to pay 43,000*l*.; the bank having failed to establish their claim for a larger sum. Allowance must be paid for a proportion of this amount allowed for works commenced.

PROPOSED PLEASURE-GROUNDS FOR ROCHESTER. A project is under the consideration of the corporation of this city for leasing the whole of the Castle-grounds, now let for market-gardens, and converting them into properly laid-out pleasure-grounds for the inhabitants of the city; the corporation also, at the same time, taking over the ancient Castle. We understand that the agent for the Earl of Jersey, to whom the Castle and the adjacent grounds belong, has expressed his willingness to accede to the proposal, and, indeed, enters very warmly into the project. Under these circumstances there is every probability of the contemplated arrangements being carried out by the corporation.

THE FATAL GAS EXPLOSION IN GRAY'S-INN-ROAD.—The coroner's jury in this case gave the following verdict:—"We find that the deaths of Basini, Villa, and Cole were caused by an explosion of gas through a fracture in one of the Chartered Gas Company's service-pipes; which we much regret, knowing that the company were aware this service had not been renewed for many years. We are of opinion that the Chartered Gas Company, knowing this, should have given special instructions to their servants to thoroughly examine the whole of the service-pipes, including all pipes as far as the meter." The foreman said the jury had but one opinion on the subject, and were unanimous in returning this verdict. The coroner said that that was equivalent to a verdict of "accidental death, caused by the defective service-pipes of the Chartered Gas Company." He would enter that verdict, and transmit the resolution of the jury just read to the gas company.

EXPLORATIONS AT REPTON. — A discovery of some interest has been recently made in the grounds of Repton Priory. The boys of the school have been for some time engaged in levelling a part of the enclosure known as the Upper Paddock, with a view to form a new cricket ground. In the course of this work they uncovered a considerable number of encaustic tiles, and a structure believed to have been used by the monks for the manufacture of encaustic tiles for the Priory Church. This is not the first discovery of a tile manufactory in connexion with a monastic establishment. It was, indeed, formerly a question among antiquaries whether any ornamental tiles were made in Great Britain. But the kilns found several years since at Great Malvern, and in Farringdon-street, London, have conclusively answered the question. The Repton excavations supply additional evidence, while in plan and construction they are unlike the other two examples, and are said to be unique.

DAMAGE TO PLYMOUTH BREAKWATER. — A Government survey of the damage has been made, and its amount is reported to be about 10,000*l*.

THE REMOVAL OF MUD. — A correspondent ("P. E. M.") suggests, with reference to the necessity for the immediate removal of mud from London streets, that if manual labour be too expensive, a useful combination for the purpose might be made of the old sweeping-machines and noiseless smoke-consuming locomotive engines.

A GAS FIRE-LIGHTER.—An invention has recently been patented, under the name of gas fire-igniter, which is intended as a substitute for wood and paper in lighting fires. A row of three gas burners is fitted on below and behind the grate bottom, with a tap at one side, so that when a fire is wanted the gas is lit, and the flame passing amongst the coals sets fire to them without the aid of wood or paper. In summer, water can be boiled by the gas alone, as in an ordinary gas fire.

ACCOMMODATION FOR THE PARIS EXHIBITION VISITORS.—An excursion-manager has sent to the periodical press an account of the result of his inquiries as to the probable cost of accommodating visitors at hotels, and otherwise, during the Exhibition. His movements, especially if he have imitators, will simply have the effect of increasing the great expectations of Parisian hotel-keepers and landlords, and leading to great charges which will keep away thousands of visitors. Much better be quiet at present.

A GOOD SNIPE-GROUND BUT A BAD BARRACK-YARD.—The *British Medical Journal* says,—The cantonment of Dum Dum, in India, is notoriously sickly and fatal to the European troops quartered there; it is aptly described as a good snipe ground, but a wretched cantonment. The 91st Highlanders having been judiciously removed thence, the 29th Enniskillens have been substituted for them for reasons past comprehension. Only the other day the 55th Regiment marched from Dum Dum reduced and enfeebled by sickness. The *Friend of India* presumes that, when the 29th becomes sufficiently sickly and inefficient, when a sufficient number of men have died to justify the urgent remonstrances of a medical man, it will also doubtless be removed. But why are they sent there?

MOSCOW.—A correspondent writes us from this city:—On Sunday, 13th inst., being New-Year's-day here (Russian old style), the Prince Governor General gave a grand reception at 9.30 a.m. Every person invited had to appear in full evening costume, or in uniform—the latter most gorgeous. The day was lovely, a brilliant sunshine and 4° *Reaumur of heat*: it was 20° of Reaumur cold a few days previously. The staircase was lined three deep with 100 footmen in gorgeous liveries, and altogether it was a magnificent sight. At the opening of the Moscow Gas Works the English engineer had to march with the Prince Governor General; and, as representing the Company, he had to be blessed, sprinkled with holy water, and to kiss the cross. The alterations in temperature at Moscow seem very great. Such a mild winter has not been known for many years.

THE TELESCOPE FOR VICTORIA.—The Legislature of Victoria having voted the sum of 5,000*l*. for the construction of a large reflecting telescope, to be erected at Melbourne, for the purpose of effecting a thorough survey of the nebulæ and multiple stars of the southern hemisphere, the president and council of the Royal Society (whose advice and co-operation, our readers have heard, had been requested) selected Mr. Grubb, of Dublin, the eminent optician, to construct this instrument. The impossibility of obtaining discs of glass of the requisite purity has rendered it imperative to employ *catoptrics* instead of *dioptrics*—reflection rather than refraction—when a telescope of large size is to be constructed. An image is formed in the focus of the mirror, and is examined by suitable eyepieces. The tube has a diameter of 4½ ft., and is of proportional length. The diameter of the speculum is but 6 in. less than that of the tube, or 4 ft., being 4½ in. in thickness, and weighing about 27 cwt. The grinding was performed by a polishing machine and steam-engine, constructed for and belonging to the telescope, and which will accompany it to Melbourne. The weight of the telescope, when completed, will be about 10 tons, and it will be moved by clockwork.

AN ARCHITECT'S LIBRARY.—M. Alexandre du Bois, a Paris architect, who died recently, in his eighty-second year, has left behind him a library of 20,000 volumes, exclusive of pamphlets, sedulously collected during his life. Amongst other literary works nearly completed by him at the time of his death are a *Bibliographie des Beaux-Arts et Spécialement de l'Architecture*, in three volumes; and a *Bibliographie des Architectes anciens et modernes*, also in three volumes.

GAS EXPLOSION AT SUNDERLAND.—A cottage has been blown to pieces and the furniture smashed by an explosion of gas in an instance where no gas was laid on. A street lamp stood on the pavement opposite the door, and the lamplighter had injured the gas-pipe so that the gas filled the hollow of the lamp-post, and got under the pavement and into the house. The smell of gas alarmed the inhabitants, and the tenant stupidly struck a light to see where the escape came from, when immediately the explosion took place. The walls of adjoining cottages were also shattered, but no one was seriously injured.

A STATUE FOR SHAKSPEARE.—A citizen of London reviving the opinion, that the Thames Embankment, fronting the present Temple Gardens, affords a good site for a statue of Shakspeare, says,—

"If the public saw a good design, I am satisfied funds ample for the purpose would be forthcoming. I therefore am willing, preserving a strict *incognito*, to offer a premium of fifty guineas for the best design, twenty for the second, and ten for the third."

The *Athenæum* guarantees the good faith of the proposer, but something more must be done to get useful fruit from the suggestion. Precise terms must be laid down, and a proper tribunal named.

STREET BARS.—We have often urged the removal of the many bars which obstruct the metropolitan streets, and are glad to observe that the Metropolitan Board of Works are now moving in the matter. It was proposed by Mr. Shaw to apply to Parliament by petition, but eventually it was unanimously resolved,—"That it be referred to the Works and General Purposes Committee to take into their consideration the existence in the streets of the metropolis of many barriers, gates, and private tolls, to the obstruction of the general traffic, with power to take counsel's opinion thereon, and to report their recommendation to the Board." The Chairman suggested that there might be a difficulty in the way, as proprietors might be liable for breach of contract with persons who had taken premises on the faith and understanding that they should have quiet possession of them. But is not that the case, as regards possession, where persons have been expelled altogether from premises without even compensation?

SENSITIVE AND SINGING FLAMES.—Not lovyers' "Flames," but Dr. Tyndall's. At the Royal Institution last week the doctor delivered a lecture "On Sounding and Sensitive Flames," in course of which he amused his audience with a variety of very curious experiments, which culminated in his addressing some poetical lines to a flame by which he seems to have been smitten. Two gas flames were burning at the same time, one of them being long, straight, and smoky, and the other short and brilliant; and when a whistle was sounded the long flame became short and brilliant, and the other was converted into a long, dull, and smoky flame. By increasing the pressure of the gas a jet of flame about 20 inches long was produced which was peculiarly sensitive. On the slightest sound it sank down to 8 inches; and the crumpling of (pink note-?) paper seemed to throw it into convulsions. By some sounds, however, it was not in the least affected; and it was interesting to observe, when Dr. Tyndall repeated the lines of poetry alluded to, how the flame was fluttered and affected by some of the expressions and was insensible to others. Whether it was a compliment or a declaration of love which most fluttered it, the reporter did not note. On uttering the not very poetical word "boot," however, the flame remained steady; but at the word "boat"—Byron's "boat is on the shore," perhaps—it started; and a very ungallant threat to "beat" it threw it into violent commotion, and no wonder; but it was yet more powerfully affected by the sentimental exclamation "ah!" To sibilant sounds it was particularly sensitive: a hiss sent it down to the lowest point of humiliation. When a musical snuff-box, however, was put in action, it soon got over its low spirits, and danced up and down to the tune

CHURCH WORK.—We are asked to add to our notice of the Wesleyan chapel, Rickmansworth, that the warming of both chapel and school is effected by hot-water apparatus erected by Messrs. J. Jones & Sons.——Also to the notice of church at Sydenham, that it is paved with encaustic tiles supplied by the Architectural Pottery Company.

SKATING.—A subscriber writes,—On reading your sensible observations on skating, or the "suicide of skaters," where parties will still persist; the question is whether some additional suggestion might not be made for the preservation of human life, and it has occurred to me whether some simple contrivance in the form of a raft or grating might not be adopted, and kept at one end of the ice. It should be made about 12 ft. or 14 ft. square or less, of slight timbers, say 6 in. by 6 in., bolted together, having sufficient spaces between for parties to raise their heads and shoulders above the ice; and which would still float when the ice gives way and could be propelled forward.

FURTHER DISCOVERIES AT MALTON. — Some more Roman and British remains have been discovered in the cuttings for the Malton Waterworks, which, however, have now been completed. The Roman station was engrafted on an earlier British one, as clearly shown by the cuttings; in which Roman pottery, coins, and skeletons have been found overlying the original alluvium, in which the remains of red deer, flint implements, and bone pins were the chief relics. The cuttings just completed extend from the Lady's Spring, at the south-east corner of the great military station of Derventio, to a point just oppcsite the Prætorian Gate and the Roman ford across the river.

METAL DOOR.—Mentioning the works in Miss Hosmer's studio in Rome, the *Morning Post* says,—One of the most important is a door, 15 ft. high, to be cast in bronze and gold, for Lord Brownlow, who intends it for the entrance-door to a sculpture-gallery at Ashridge. The upper semicircular compartment represents, in fine bas-relief, the three elements,—earth, air, and water,—two of which, earth and water, are further illustrated, practically and poetically, by four oblong compartments, inclosing above a vintage scene on the left, and a fishing group on the right, and below centaurs and nymphs, and tritons with sea nymphs. The centre panels between these four corners are divided into twelve compartments, with charming figures and groups allusive to the twelve hours of the night. The jambs and upper arch will be of marble, inlaid with Byzantine mosaic. Another fine work, almost completed, is a fountain executed for Lady Marion Alford, surmounted by a syren, to whose song four Cupids on dolphins below are listening with upturned heads.

PROFESSOR LEONE LEVI UPON "OUR WORKMEN."—A lecture, under the auspices of the Nottingham Mechanics' Institution, has been given by Dr. Levi, at the hall of that society, the subject being, "Our Workmen: their Labours, Rewards, and Trials." The mayor, Mr. J. L. Thackeray, occupied the chair, and there was a large audience, amongst whom was the Duke of St. Alban's. The lecturer delivered an exhaustive address of about an hour and a half in duration. In speaking of trades' unions, he said, let them not do them an injustice. They did good in the discipline and order which they enforced upon the different trades, which acted as a check against riots and excesses, and how often were they made to subserve the purposes of charity and munificence. There were points in their action, however, decidedly objectionable. The restriction they put upon the number of apprentices, and every other hinderance imposed upon the freedom of labour, admitted of no defence whatever. They could not dispute the right to influence others living with them; but all coercion or intimidation used for that purpose was illegal, and reprehensible. If they desired independent action for themselves they must allow it to others. But what should he say in favour of locks-out? Not a word in their favour. Nothing could be more injurious to the masters or to the operatives than such an extreme measure. Concession on either side was better, and arbitration was better still. One great source of absorption of the working man's earnings was drink. It was a very sad fact that in the United Kingdom as much as 70,000,000*l.* a year were spent in ardent spirits, exclusive of wine; and of that amount 50,000,000*l.* or upwards came out of the pockets of the working men!

THE MANCHESTER ALBERT MEMORIAL. — The memorial of the late Prince Consort, in the centre of Albert-square, Manchester, has been inaugurated by Dr. Fairbairn. A view of the monument will be found in a previous volume of the *Builder*.

AN OBSERVATORY BURNT.—On Sunday last, the observatory connected with St. Gregory's College, Downside, near Bath, was totally destroyed by fire. It originated apparently in the heating apparatus, which kindled the joists of the ground-floor.

MODEL DWELLINGS IN HALIFAX.—Mr. John Crossley has erected, in Halifax, a stone building, in the Venetian style of architecture, at a cost of about 3,000*l.*, as a model-lodging house. Mr. Crossley has conducted a model-lodging house at the Mulcture Hall, Halifax, for fifteen years, and the institution has pecuniarily been successful.

THE OUTBREAK OF FIRES.—A correspondent, R. T., suggests, that while water and firemen are being sought for, every fireplace in a house, by previous arrangement, might be closed up by pulling a cord connected with an iron plate in the chimney-stack; and that a policeman, by breaking a hole in a fanlight, for example, might not only do this, but also break some fragile vase, hermetically sealed and containing fire-extinguishing materials, so arranged as to be thus brought into action. Or such a vessel could be carried to the locality of the fire and thrown in.

INAUGURATION OF A NEW BUILDING AT RYDE, FOR THE YOUNG MEN'S CHRISTIAN ASSOCIATION.—The building in Lind-street, Ryde, nearly opposite the town-hall, which has been recently erected for the use of this Association, has been inaugurated. For the designs the society is indebted to Mr. Thomas Dashwood, honorary architect. Two rooms on the ground-floor, fitted with shelves and bookcases, are set apart for the circulating and reference libraries. On the first-floor is an apartment capable of being used as a general reading and news room. There is a small apartment on the same floor, suitable for a conversation or retiring room for members. On the second floor there are two rooms of nearly equal dimensions, which are intended to be used as class-rooms.

THE "BUILDER" FIRE. — The accomplished author of "Ten Thousand a Year," Mr. Samuel Warren, Recorder of Hull, has recently borne voluntary testimony, in a letter widely printed, to the value of the mode of economically burning coals in grates which we described some years ago, and which is pretty well known in many parts of the country as our fire,—the *Builder* fire. Mr. Warren, however, omits in his otherwise excellent letter one of our especial points, namely, that, when the bottom of the grate has been covered with a thin plate of iron (or, more cheaply, by spreading over it some fire-clay), and the coals have been put in, the fire should be lighted *at the top*. This necessitates lighting the fire some little time before it is wanted, or the mass will not have become incandescent; but the gain in point of economy, avoidance of trouble, and amount of steady heat, is very great indeed. From a fire thus lighted, properly, scarcely any smoke escapes, another very important advantage.

BRADFORD NEW EXCHANGE. — The exterior, with the exception of the final touches from the hands of the carvers in stone, is now all but finished; and the great hall, it is hoped, will in a month or two be completed. The medallions which are now being sculptured along the front of the Exchange represent men among statesmen, navigators, engineers, and manufacturers who have cleared the way for trade, and to whose lives and labours towns such as this owe their prosperity. Next to the tower, in the place of honour on the Market-street front, the head of Cobden is appropriately placed; and next to that is a head of Mr. Titus Salt. These are all that are finished on this front, but heads of Stephenson and Watt are partly completed, and there are to follow in order Arkwright, Jacquard, Gladstone, and Palmerston. The floor of the hall is now being paved with Maw's encaustic tiles. Along the sides the walls are tiled to the height of 5 ft. with encaustic tiles in low relief. At their bases the beams supporting the roof are ornamented with figures carved in wood, symbolical of justice, commerce, science, navigation, &c. The crown of the roof is of stained glass. Messrs. Lockwood & Mawson are the architects.

THE COLISEUM, ROME.—According to the *Revue Artistique*, M. Visconti, architect, has been commissioned by the Pope to restore the upper part of the Flavian amphitheatre.

THE UNITED EXCAVATORS' SOCIETY'S ANNUAL MEETING.—The first annual meeting of this society was held at the Lambeth Baths, on Monday evening, under the presidency of Mr. G. M. Murphy. After an address from the chairman, the secretary stated that, notwithstanding the inclement season and the unsettled year through which they had passed, they had still fourteen lodges, comprising some 800 members, with a balance at the banker's of 320*l.*

INFRINGEMENT OF A BUILDING ACT IN PALESTINE.—Mr. George Williams writes from King's College, Cambridge, on behalf of "the smallest nationality in the world." This, it appears, is the Samaritan community, consisting of only 150 souls, who have experienced a literal fulfilment of the proverb, that "He that exalteth his gate seeketh destruction." They had heightened the street-door of their synagogue at Nablous or Shechem, the ancient capital of Samaria, from 4 ft. to about 5 ft. 6 in.; they had also renewed some part of the pavement of the synagogue itself, which had become decayed. These repairs were declared illegal by the Turkish official, who, accompanied by a mob of 200 or 300 fanatics, went himself to the synagogue, in the south-west quarter of the city, where he directed and superintended the demolition of the new work, which was left a complete wreck, and its owners are not allowed to repair this their only place of worship.

TENDERS

For the erection of Premises, Leadenhall-street, for Messrs. Pound & Sons. Messrs. Humphreys & Son, architects:—

Myers	£6,179	0	0
Rider & Son	5,991	0	0
Henshaw	5,979	0	0
King & Sons	5,960	0	0
Sparks	5,890	0	0
Ennor	5,890	0	0
Ashby & Sons	5,875	0	0
Hart	5,831	0	0
Ashby & Horner	5,800	0	0
Brass (accepted)	5,634	0	0

For the new drapery establishment, Sheffield, exclusive of stoves, chimney-pieces, warming apparatus, gas or any fittings, for Messrs. Cole, Brothers. Messrs. Flockton & Abbott, architects:—

Wilson	£10,350	0	0
Robertson	10,300	0	0
Huddleston	10,132	0	0
Barber	9,966	10	6
Gomersall (accepted)	9,650	0	0
Clubley & Stringfellow	9,494	0	0

For extensions to the Wolverhampton Union Workhouse. Mr. Veall, architect:—

Higham	£1,100	0	0
Livatt	1,085	0	0
Birkett	1,066	0	0
Roberts	999	0	0
Plank	974	0	0
Thompson (accepted)	935	0	0

For rebuilding house No. 7, Green-street, Bethnal-green, for Mr. G. Baugh. Messrs. Tolley & Dale, architects:—

Withers	£756	0	0
Forrest	748	0	0
Higgs (accepted)	677	0	0

Accepted for Kent County Lunatic Asylum, new office buildings, dining-hall, &c. Mr. Martin Bulmer, architect. Quantities supplied by Mr. G. Ruck and Mr. T. Ladds:—

Builder's Work.

Stiff	£16,767	0	0

Smith and Founder's Work.

Weeks & Son	£1,285	0	0

Plumber and Glazier's, &c., Work.

Aldridge	£2,538	0	0

For new sewer, Yeoman's-row, Brompton, for the Kensington Vestry:—

Bond	£587	0	0
Williams	400	0	0
Atkins	397	0	0
Moxon & Mutton	395	0	0
Thackeray	395	0	0
Lacey	385	0	0
Wigmore	374	10	0
Thirst	349	0	0
Whittick (accepted)	295	0	0

For alteration at the Rising Sun Tavern, Strand. Mr. Wm. Nunn, architect:—

Anley (accepted)	£521	0	0

For rebuilding the Countess of Huntingdon's Chapel, Mount Ephraim, Tunbridge Wells. Messrs. Wimble & Taylor, architects:—

Edwards, Brothers	£5,611	6	0
Walker	5,301	12	0
Grensted	5,066	2	9
Dove, Brothers	4,570	0	0
Sims & Marten	4,534	0	0
King & Sons	4,277	15	0
Anscomb	4,073	0	0